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THE GREAT DIDACTIC
OF
JOHN AMOS COMENIUS

By M. W. KEATINGE, M.A., D.Sc.

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Exfumq: M: S:

G. Glouer sc.

Loc. here an Exile who to serue his God.
Hath sharply tasted of proud Pasnurs Rod.
Whose learning, Piety, & true worth, being knowne
To all the world, makes all the world his owne.
F. Q.

THE
GREAT DIDACTIC
OF
JOHN AMOS COMENIUS

TRANSLATED INTO ENGLISH AND EDITED WITH
BIOGRAPHICAL, HISTORICAL AND CRITICAL
INTRODUCTIONS

BY

M. W. KEATINGE, M.A.

READER IN EDUCATION IN THE UNIVERSITY OF OXFORD

PART I.—INTRODUCTIONS

A. & C. BLACK, LTD.

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PREFACE TO THE SECOND EDITION

I AM fully aware of the shortcomings in the edition of the Great Didactic now reissued, and had hoped to remedy them before the work was reprinted. I am, however, wholly without the leisure to recast the Introductions in a form more worthy of Comenius, and therefore, as a second edition is urgently called for, I have corrected a few blunders, made a few alterations, and added a third Introduction which gives a critical examination of Comenius's doctrines in comparison with a modern theory of education.

M. W. K.

OXFORD, *July 1910.*

PREFACE TO THE FIRST EDITION

THE present version of the *Didactica Magna* is a close paraphrase from the original Latin in the Advocates' Library, Edinburgh. The Introductions are based upon original research and on the best German authorities. They embody a fuller account of Comenius's life and works than has hitherto been accessible to the English reader; while a part of their contents is, I believe, a fresh contribution to the biography and the historical environment of the great School Reformer.

The portrait is a reproduction of the frontispiece to Hartlib's *A Reformation of Schooles*, published in 1642.

My best thanks are due to my friend and colleague, Dr. J. S. Mackay, who read over a large portion of the work in manuscript, and gave me valuable assistance on many points.

M. W. K.

THE EDINBURGH ACADEMY,
February 1896.

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INTRODUCTION

I

BIOGRAPHICAL

JOHN AMOS COMENIUS (in Bohemian Komensky) was born on the 28th of March 1592, in the village of Nivnitz,¹ near Ungarisch-Brod in Moravia. His father, Martin Komensky, was a miller in fairly prosperous circumstances and belonged to the religious body known as the Moravian Brethren.² This community had been organised in 1547 ; it carried on, with modifications, the traditions of John Hus, and took a position midway between the Utraquists, his followers, and the Roman Catholics. Though the ideas of the Lutherans had not been without a decided influence, the Moravians differed from that body on certain fundamental points, such as the Doctrine of Works, and, at one period, the celibacy of the clergy. Their chief

¹ In the Introduction to *De cultura ingeniorum oratio* (*Op. Did. Omn.* iii. 72) he calls himself Hunno Brodensis Moravus ; but, as he was known at Herborn as John Amos Niwnensis, was inscribed in the Matriculation book at Heidelberg as Joannes Amos Nivanus Moravus, and wrote his name "Johannes Amos Nivanus" on the manuscript of Copernicus's *De revolutionibus orbium cælestium* that he bought from a widow Christian at Heidelberg, it seems probable that Nivnitz was his birthplace and that he refers to Ungarisch-Brod as the spot where his childhood was spent.

² By contemporary writers they are also termed the *Bohemian Brethren* and *The Unity*.

characteristic was extreme simplicity, and their great desideratum to lead a pure life, and one as far as possible in accordance with the commands of Scripture, which they interpreted in their most literal sense.

It was in this atmosphere of free Biblical inquiry that Comenius was brought up, and the result of early training can be seen in his habit of appealing to the Scriptures on every possible occasion, and of proving his most technical propositions directly from their pages.

Shortly after his son's birth, Martin Komensky left Nivnitz and moved to Ungarisch-Brod, where he died in 1602. His wife did not survive him more than a couple of years, and shortly afterwards his two daughters Ludmilla and Susanna died also. Comenius was thus left an orphan at an early age, and his guardians appear to have robbed him of any small fortune that his father had bequeathed. This was not the only manifestation of his evil star. During the two following years, while attending the elementary school at Strasnic, he made the acquaintance of Nicolaus Drabik. It was a strange irony of fate that a wanderer like Comenius, when only eleven years old and in his native land, should commence the intimacy that was to embitter his old age in Amsterdam.

From the point of view of positive instruction this early training was unproductive, and the Latin school at Prerau, to which he was not sent till his sixteenth year,¹ appears to have been even less efficient than the other secondary schools of the age. Comenius however, who, as we shall see, was inclined to underestimate the educational activity of contemporary Europe, assures us that his experience was nothing exceptional, and that he was but one of the thousands whose youth was wasted in these "slaughter-houses" of the young.² Often did his eyes fill with tears

¹ Admodum enim puer parente utroque orbatus, tutorum supinitate ita fui neglectus ut demum ætatis anno decimo sexto Latina elementa gustare contigerit.—J. A. Comenius, *Opera Didactica Omnia*, Amsterdam, 1657, i. 442.

² Millibus e multis ego quoque sum unus, miser homuncio, cui

when thinking of his wasted childhood, often did he vainly wish that he might live those years over again and employ them more profitably.

The defects in his early education were, however, the seeds from which sprang the whole of his didactic efforts. Considerably older than his schoolfellows, he was able to criticise the methods in use, and speedily arrived at the conclusion that the lack of progress was due more to the inefficiency of the teachers than to the idleness of their pupils. From this time onwards, full of pity for the sufferings of his fellows, he began to devise new methods of class instruction and better schemes of study. From the vivid memory of the horrors through which he had passed, of the thousand-and-one rules that had to be learned by rote before they were understood, of the monotonous study of grammar, only diversified by the maddening effort to translate Latin authors without the assistance of suitable dictionaries or commentaries, sprang that intense sympathy with beginners which characterises his whole life and gives practical worth to every precept that he enunciated.

In the Latin school he remained only for two years. He had definitely made up his mind to seek ordination as a minister of the Moravian Brethren, and needed a more advanced education than could be obtained in Bohemia. Not that the University of Prague was in any way below the standard of the age, but it was in the hands of the Utraquists, whose attitude towards the "Brethren" was by no means friendly. It was therefore to Herborn in Nassau that Comenius, then eighteen years old, turned his steps. A university had been founded in this town in 1584, and enjoyed a very high reputation. The range of subjects taught was wide, as, though great prominence was given to Theology, ample provision was made for the "Humanities" as well; and in addition it was possible to learn music and the French and Italian languages.

It was under the Rectorship of Wolfgang Ficinus that
amœnissimum vitæ totius ver, florentes juventutis anni, nugis scholasticis
transmissi, misere perierunt.—*Did Mag.* xi. 13.

Comenius matriculated in March 1611. Of his residence at the University we unfortunately know very little ; but he can scarcely have remained there for two years without coming under the influence of John Henry Alsted, and the similarity of their views and dispositions renders it probable that the two men were brought into very close contact. Although only twenty-six years old, Alsted had already a very considerable reputation, and in point of attainments was undoubtedly one of the most remarkable men of his time. His industry was so great that his contemporaries christened him *Sedulitas*,¹ an anagram on the Latinised form of his name. As an etymologist he took a high place, as a writer on Didactic he ranks historically with Ratke as the immediate forerunner of Comenius, and his *Encyclopædia Scientiarum Omnium*, published at Herborn in 1630, proves him to have been a master in every branch of learning. The range of knowledge was limited, and to write with authority *de omni scibili* was not the impossibility that it now is ; but a glance through the pages of this Encyclopædia shows that its author obtained a marvellous grip of every subject that he studied, and had a very unusual power of co-ordinating the mass of erudition that he possessed. Nor did his many-sidedness end here. His *Triumphus Biblicus*, in which he attempts to lay the foundation of all positive knowledge in the literal interpretation of Scripture, displays an aspect of his character that we do not meet in the Encyclopædia, and gives evidence of a mind imbued with the most intense mysticism.

Of the exact nature of the intercourse between Comenius and Alsted we have no direct information, but, as Alsted was in the habit of maintaining the closest relations with his pupils and is afterwards found in correspondence with Comenius, we may take it for granted that the great similarity of the views held by the two men

¹ *Sedulus in libris scribendis atque legendis*
Alstedius nomen sedulitatis habet.

Encyclopædia Scientiarum Omnium, Leyden, 1649
(2nd Ed.), ad init.

should not be attributed to accident. The only point on which they were at actual variance was the constitution of the elementary or vernacular school. This Alsted would have restricted to the use of girls, and of boys destined for a handicraft, while Comenius insists on the necessity of giving a distinct primary education to those who are afterwards to enter a learned profession. With the exception of this difference of opinion, a large number of the most striking precepts that figure in the Great Didactic might have been taken direct from Alsted's *Encyclopaedia*. The man who declared that instruction in the mother-tongue should precede the study of Latin, who thought that grammar was the least effective instrument in teaching a language,¹ who proclaimed, almost in Baconian language, the doctrine of "Experience,"² and who believed in method to such an extent that he drew up time-tables of the most intricate description for a day, a week, a month, and a year, assuredly played the part of a kindly foster-father to the callow educational zeal of the Herborn student.

That Comenius, while at Herborn, devoted much attention to the study of educational method, we know from his own words. Wolfgang Ratke's essay on the Reformation of schools had been authorised and approved by the Universities of Jena and of Giessen in 1612, and a tractate on the new method, probably that by the Giessen professors Helwig and Jung, rapidly found its way into Comenius's hands.³ To this he gratefully acknowledges his debt and attributes his efforts to reform the school at Prerau.

From Herborn he proceeded to Heidelberg, where he matriculated in June 1613. Here he appears to have

¹ Nulla lingua docet ex grammatica.—*Encyc. Scient. Omn.* ii. 287.

² Experienciae nulla authoritas præjudicet.—*Ibid.*

³ Statim ut Wolfgangii Ratichii de Studiorum rectificanda methodo consilium, ab Academiis Jenensi et Gissena scripto publico laudatum, Anno 1612, prodierat, fama haec meas quoque ad aures studiis tunc Herbornæ Nassoviorum operam dantis pervenit.—*Op. Did. Omn.* i. 3.

devoted some attention to the study of astronomy, as we find him purchasing the original manuscript of one of Copernicus's works. This, however, is the solitary incident that is known of his residence here.

After a journey through Europe, in the course of which he visited Amsterdam for the first time, he went back to Heidelberg. A short illness followed, possibly the result of exposure on his travels, and in 1614 he returned to Moravia on foot. He was now twenty-two years old, and, as he could not be ordained for two years, undertook the management of the school at Prerau. This was one of the many schools established by the "Unity" for the education of those of their own persuasion. It must have been rather more than an elementary school, as Comenius, who now for the first time came into contact with the practical difficulties of instruction, began to evolve an easier method for teaching Latin. To this he devoted a great deal of attention¹ and produced a small book for beginners,² afterwards printed at Prague in 1616, which has not been preserved. This was not his first literary effort. As early as 1612, while at Herborn, he had begun to collect the materials for a Bohemian dictionary with the twofold object of purifying his native tongue and of mastering it thoroughly. As he was now old enough to commence his ministry in the Moravian Church, he was ordained in April 1616, in company with his old schoolfellow Drabik. The two following years he probably spent at Olmütz.

Of the next few years, as of the whole of the earlier portion of his life, the information to be obtained is fragmentary. In 1618 he was sent to Fulneck, where he acted as pastor to the Moravian community and was at the same time inspector of the school. During the three years that followed he devoted himself entirely to the spiritual and bodily welfare of his flock, sparing no pains to further the prosperity of the town. He even tried to introduce bee-culture, and sent to Hungary for bees, then

¹ Multa igitur et multum animo volvebam.—*Op. Did. Omn.* i. 442.

² Facilioris grammaticæ præcepta.—*Ibid.* i. 3.

unknown in Fulneck.¹ His married life now began, and in the society of his wife, a Hungarian lady, Comenius spent what were probably his happiest years.

The year in which he entered upon his pastorate at Fulneck is memorable for the outbreak of the Thirty Years' War, and from this time onwards the position of the non-Catholic bodies, exposed as they were to the relentless persecution of Pope Paul V. and the Jesuits, was most precarious. Their hopes were finally overthrown by the battle of the White Mountain in November 1620, and by the execution of the chief Bohemian Protestants, which followed at Prague in June 1621.

Comenius's wanderings were now to begin. In 1621 Fulneck was plundered and burned by Spanish troops. On this occasion he lost everything that he possessed, including the greater part of his library and the manuscript of some Didactic works on which he had been engaged, and took refuge, in company with many others of the Brethren, on the estate of Karl von Zerotin. Here he remained for three years, during which time he occupied himself in reading books on education,² and wrote besides several religious works in the Czech language. To this period must also be ascribed his metrical translation of the Psalms, a composition of great poetic merit; his *Labyrinth of the World*, an allegorical description of life, dedicated to Karl von Zerotin; and a map of Moravia that was for a long time the best in existence.³

It was doubtless in this literary activity that he sought relief for the sorrow caused him by the death of his wife and his two children,⁴ who were carried off in 1622 by an epidemic that was raging through Moravia. He was thus once more left alone in the world.

In 1624, with startling rapidity, if we consider the cir-

¹ J. A. Comenius, *Grosze Unterrichtslehre* (Julius Beeger und Franz Zoubek), p. 14.

² *Op. Did. Omn.* i. 442.

³ It had gone through twenty editions by 1695.

⁴ *Ep. ad Montanum*, p. 77. Quoted by Kvacsala in *Johann Amos Comenius. Sein Leben und seine Schriften*. Notes, p. 12.

cumstances and the forlorn condition of the Brethren, he married again. His bride was Maria Dorothea Cyril, the daughter of John Cyril, a Moravian pastor and a former senior of the Consistory at Prague. The members of the Unity cannot have been left entirely destitute by the persecution to which they were subjected, as Maria brought her husband a small fortune. The sequel proved that marriage at such a time had been far from prudent. In the same year the order was issued that all non-Catholic preachers and pastors were to leave Bohemia within six weeks, and a few months later another mandate expelled them from Moravia as well. Karl von Zerotin had great influence with Ferdinand II., but the Jesuits were too strong for him. He received a personal injunction to cease harbouring non-Catholics on his estate, and the twenty-four ministers whom he was sheltering had to conceal themselves as best they could in caves and forests.

The Brethren now recognised that all hope of remaining in their fatherland must be relinquished, and in 1625 sent Comenius and two companions to Poland to report on the advisability of their removing thither in a body. On the way the messengers made the acquaintance of Christopher Kotter, a native of Sprottau. Kotter was a prophet, and his visions and the announcements that he had to make concerning the future of the Evangelical Church were full of interest to the Brethren. Comenius, to whom anything of a prophetic nature was always an attraction, gave a proof of his remarkable energy by translating the whole of Kotter's prophecies into Czech, a task which took him sixteen days. After a short visit to Berlin, where there were a number of Bohemian exiles, he returned to Moravia. During the next two years the Brethren held themselves in readiness to fly at a moment's notice. The only incident of any interest is the appearance on the scene of a prophetess, Christina Poniatowska. Christina was an hysterical girl, only sixteen years old, and her visions, like those of Kotter, dealt with the speedy restoration of the Evangelic Church, and the cessation of

the persecutions to which it was being subjected. Needless to say, Comenius displayed as great an interest in her as he had done in Kotter. Already the visionary tendencies, out of which his enemies made such capital in later years, were getting possession of him.

In 1627 a few of the Evangelical Pastors, preparatory to their final departure, took refuge on the estate of George Sadowski at Slaupna, and here Comenius again took up the threads of his didactic efforts. As a slight return for the protection afforded him, John Stadius, one of the pastors, had undertaken the education of Sadowski's three sons, and asked Comenius, whose interest in the subject was well known, to draw up a few rules for his guidance.¹ The request was gladly complied with, and the return to his former pursuit was accentuated by the following incident.

One summer day Comenius and a few of the other pastors walked over to the castle of Wilcitz to look at the library there. Among other works of interest they found the *Didactic* of Elias Bodinus, which had recently been brought from Germany. The perusal of this fired Comenius to attempt a work on a similar scale in his own language. True, his Church and the institutions that it supported were falling into ruin before his eyes, but, if he might believe the prophecies of Kotter and of Poniatowska, the day was not distant when the Brethren would be restored to their native land, and then his first task would be the reorganisation of the schools. "With this end in view," he writes, "I entered on the work with fervour, and completed as much of it as I could while I still remained in my native land."²

His efforts were soon interrupted. In 1628 all who shared the evangelic faith had definitely to leave Bohemia. Comenius, accompanied by his wife, his father-in-law, and the prophetess Poniatowska, set out for Poland, and on the 28th of March reached Lissa, a town in the province of Posen. Here, under the powerful protection of Count

¹ *Op. Did. Omn.* i. 3.

² *Ibid.*

Raphael of Lissa, he was destined to find a home for the next twelve years, and it is to this period that his chief educational activity belongs. Though to the end of his days he never ceased to devise fresh plans for the easier instruction of the young, most of the works that made his name famous were written before 1641. There were many reasons why these years should be especially fruitful. Now for the first time since his ordination he took to teaching as a means of earning his livelihood, and, as a master of the Gymnasium at Lissa, of which he became Rector in 1636,¹ he had ample means of putting his theories into practice, and of bringing them into harmony with the dust and friction of the class-room. To these years of actual work in a large institution is due much of the practical character of his writings, and the very faults of the Gymnasium (it had to be completely remodelled in 1635, in order to bring it into harmony with his ideas) served to show him more clearly what should be avoided. In addition to this he had far more time to devote to educational theory than at any later period of his life. Though the welfare of the Unity already absorbed a large share of his energy, he had not that weight of responsibility that made him, as its bishop, look on all else as a subsidiary task. His pansophic conceptions, that afterwards took such hold of him, were only in their infancy, and more important than all, his spirit was still unbroken. He still believed that the Evangelical religion would be restored in his native land, and that the happy days of his early ministry would be repeated. He still believed that the prophecies of Kotter and of Poniatowska would be fulfilled, and in his efforts to reform the Gymnasium at Lissa and to write suitable school-books for it, he saw nothing but a preparation for the future reformation of schools in Bohemia, and a means by which the youth of his own country might be brought up with minds well tempered to fight for their country and their Church. He accordingly applied himself to his task with great vigour. The

¹ Zoubek, p. 28.

Gymnasium at Lissa consisted of four classes, and instruction was given for five hours daily. All the time that remained to him he devoted to the working out of his ideas. The Great Didactic, his *Magnum Opus*, for which he had already begun to make notes at Slaupna, now began to assume a definite shape, and in order that it might embody the views of those whose opinion was most worth having, he attempted to place himself in communication with Ratke, first ascertaining that he was still alive. But Ratke, who in his characteristics resembled a vendor of quack medicines, returned no answer to Comenius's letter.¹ Again he wrote adjuring him, by all that was sacred, not to keep him in suspense any longer, but to give him some details of the true method that he was reported to have discovered. Again he waited in vain for an answer, and it was not till three years later that a letter from George Wincler, pastor of Goldbergen in Silesia, explained the silence. The fact was that Ratke made as great a mystery of his method as was possible, and hoped, by judiciously concealing its details and advertising its merits, to sell it for a high price to some prince or noble. Without gold he resolutely refused to speak. "What hopes," writes Wincler, "did not the pompous eulogy of Ratke's method by Helwig and Jung arouse? But our friend Ratke preserves his silence, and will continue to do so. Mr. Moser, the chief assistant in our school, actually went to live with him in the hope of finding out the basis of his method, but came away empty-handed."²

As a matter of fact, Comenius was acquainted with many points of the method that was so carefully shrouded, and, though he cannot resist a sneer at the system and its pretensions,³ never forgets to acknowledge that it was Ratke who first fired him to attempt school-reform.

Getting no answer from Ratke he now addressed a

¹ *Op. Did. Omn.* ii. 282.

² *Ibid.* ii. 282.

³ *Hæc summa est Ratichianæ illius vulgo decantatae methodi.—Ibid.*
ii. 81.

letter to John Valentine Andreae,¹ whose works, both religious and educational, he had read with great interest. Andreae, who was then pastor of the church at Calva in the Duchy of Wittemberg, sent a prompt reply, but only to the effect that he was too old to pronounce an opinion on such matters. Greatly disappointed, Comenius wrote again, but, though the answer that he elicited was long and sympathetic, it contained nothing that could help him to put his ideas into shape.

Of greater use were the didactic works of Rhenius, Ritter, and Glaum² that now came into his hands.³ These writers were loud in their complaints of contemporary education, and turned a search-light on the defective arrangements that Comenius saw daily in the Gymnasium. Less stimulating, perhaps, but of more definite assistance, were the writings of Eilhard Lubin and of C. Vogel. Lubin, a friend of Andreae's, had been elected Professor of Theology at Rostock in 1605, and had brought out a parallel edition of the New Testament in Latin and Greek, to which he had prefixed some hints on the teaching of Latin to boys.⁴ Vogel, who was head-master of the Paedagogium at Göttingen, had drawn up a scheme of instruction in Latin in which he had specified the daily task for twelve months. The student was to commence by learning a list of simple words, arranged in alphabetical order with the German meanings attached, and was then to aid his memory by combining these words into sentences. In this way he claimed that a boy of moderate intelligence, by working only two hours daily, could easily learn the whole Latin language in one year. The system was probably in Comenius's thoughts when he devised the

¹ *Op. Did. Omn.* ii. 283.

² In 1628 Gabriel Holstein had expounded Glaum's method under the title "Divinæ Glaumianæ Methodi Specimina," and claimed that any language could, by its aid, be learned in six months. "But," says Comenius, "hanc methodum prodiisse [sic] non vidimus," ii. 86, 87.

³ Comenius ad Palatinum Belzensem.—*Ep. Com. Mus. Boh.* [Kvac-sala.]

⁴ *Consilium de latina lingua compendiōse a pueris addiscendā.*

Janua Linguarum; the claim has been made with equal assurance by all the inventors of infallible language-methods, from that day to this.

More original, and full of sound common-sense, were the ideas of J. Cecilius Frey, a physician residing in Paris. He had brought out a work on education in 1629,¹ and this must have come into Comenius's hands shortly after publication. According to Frey, all languages should be learned colloquially, and attention should be given to arithmetic, geography, drawing, and mechanics. In this upholder of "real studies" Comenius must have hailed a kindred spirit.

With these works before him Comenius applied himself to the double task of creating a more comprehensive scheme of education than had before been devised, and of compiling a series of class-books suited to the various stages of scholars. These books, while carefully adapted to the capacity of the schoolboy, were written in accordance with the philosophic principles set forth in *The Great Didactic*, and thus to a remarkable degree combined theory and practice. The class-books were written for the practical teacher, the *Didactic* was intended for the schoolmaster whose interest in his work was not confined to the school-room, and for nobles, statesmen, and philosophers who wished to reform the schools of their country, but found no scheme ready to hand that was both practical and comprehensive.

Comenius's aims were revolutionary, and he believed his didactic principles to be capable of changing by slow degrees the aspect of civilisation, but the basis on which they rested was that of harmonious development from existing institutions. Children were to learn their lessons in less time and with less trouble. This had been suggested by previous writers. The time thus gained was to be

¹ *J. C. Frey, Medici, Paris. Opuscula varia nusquam edita, Parisiis, 1646*, pp. 327-331. Frey recommends "Coenobia," or continuous conversation in a boarding-school, as the best means of learning a language.

devoted to a thorough grounding in morality and religion. This again had been frequently urged, though not so weightily or so systematically. But when we come to the introduction of "real studies," the rudiments of which are to be taught in the nursery, and when his views on this subject gradually merge into "Pansophia" or "Universal Knowledge," we feel that a really new element has been introduced. This element, however, contains nothing subversive. Nothing could be further removed from the method of Rousseau. Comenius starts with no fundamental condemnation of society. No brilliant paradoxes fill his pages. His reform is to be a gradual development of what already exists, and, that his suggestions may be practicable and may pave the way for a transition with as little friction as possible, he bases them on the writings of his predecessors, whose work he adopts and adapts whenever he thinks fit. With some of these he was not familiar. As we shall see, in our general view of the educational systems of the age, there were writers of whom he had not heard; but, be that as it may, he had done all in his power to analyse the tendencies actually at work, and his *Didactic* is an endeavour to embody all that was good in existing schemes, while adding many features that were new.

From the first day of his residence in Lissa, Comenius never ceased to work at his comprehensive treatise *The Great Didactic*. Written in Czech, and probably completed in 1632, it remained in manuscript till 1849, when it was printed at Prague. A Latin translation, however, with several additional chapters, was published at Amsterdam in 1657, and occupies the first ninety-eight pages of the *Opera Didactica Omnia*.

Even before his final departure from Bohemia, Comenius had probably sketched out his educational scheme, in which he provides for the education of a child from the very hour of its birth. Six years in what he calls the Mother School, six years in the Vernacular School, and six years in the Latin School enable a young man to proceed to the university at eighteen, having had a training,

though necessarily a somewhat superficial one, in every subject that possesses educational value. In accordance with this scheme Comenius prepared several guides and class-books for the use of the teachers and pupils in the various classes. The first of these, the *Informatorium Skoly Materske*, or *Informatory of the Mother School*, was written in Czech, in which language it was not published till 1858. A German translation was issued at Lissa in 1633 for the Palatine of Belz.¹ This work, which appears in the folio of 1657 as *Schola Infantiae*, or *The School of Infancy*, was primarily intended for parents, and treats at length some of the points touched on in *The Great Didactic*, and more particularly in chap. xxviii., *Sketch of the Mother School*. It is written in the voluminous style characteristic of the author, and the chapters treat of the following subjects:—

1. The greatest care should be taken of children, God's most precious gift.
2. Why God sends so many children into the world.
3. Children stand in great need of a good education.
4. In what subjects children should be instructed.
5. How their safety and health can be attained.
6. How they can be taught to take an intelligent interest in what they see around them.
7. How they should be habituated to the actualities of life.
8. How they should be taught eloquence and the proper use of language.
9. How they can be brought up in the paths of morality.
10. How they can be imbued with piety.
11. How long they are to be detained in the Mother School.
12. How they are to be prepared for the Public Schools.

Comenius was thus the first to enunciate a great truth that is too often forgotten—education begins on the

¹ *Op. Did. Omn.* i. 197.

mother's knee. The schools for older boys may be as good as possible, but they can never be thoroughly effective unless the children come to them possessed of an elementary grounding in each subject taught, a grounding that can best be given by the patient mother. At this stage education cannot be organised in any cut-and-dried fashion. What is necessary is a suggestive hand-book that shall tell parents what is required of them, and how these requirements can be met. It was to meet this need that the *Informatory of the Mother School* was composed. For the Mother School class-books were unnecessary, as the instruction given was naturally of an informal character.

The children who go to the Vernacular School, however, are old enough to be arranged in definite classes, and to meet their wants Comenius wrote six class-books, one for each class. These books, like the *Informatory of the Mother School*, were composed with a view to the reorganisation of Evangelical schools in Bohemia.¹ This occasion did not come, and the books were never published. The Czech language, in which they were written, appealed to a very small audience, while the books dealing with the Latin School were of universal interest. Under pressure of other work, therefore, their author never found time to correct them, and no trace of them remains but their titles translated into Latin and a short description of each given by Comenius himself.¹ The first, intended for boys in their seventh year, is the *Violet-bed of the Christian Youth*, containing "the pleasantest flowerets of scholastic instruction."

The second is the *Rose-bed of the Christian Youth*, containing "nosegays of the most fragrant flowers of knowledge."

For the third year of attendance a more ambitious work was provided, to be called *The Garden of Letters and of Wisdom*. This was to embody a pleasantly-written account of "everything necessary to be known in heaven and earth."

¹ *Op. Did. Omn.* i, 248, 249.

For the fourth year's work the *Labyrinth of Wisdom* was provided. This consisted largely of questions and answers of a subtle description, and was intended to sharpen the intellect. Next followed the *Spiritual Balsam-bed of the Christian Youth*, in which the use of all sciences and arts is demonstrated, while the series is terminated by the *Paradise of the Soul*, which comprised an abstract of Scripture History, together with the principal Church hymns and prayers.

It is much to be regretted that this series of books has not been preserved, but the titles enable us to gather an adequate idea of their contents. The scholar enters the vernacular school, having received a grounding in the elements of knowledge. This groundwork is developed in a definite manner by means of regular class instruction, and thus, by the time he reaches his twelfth year, the boy possesses a fair acquaintance with the realities of the world in which he lives. This acquaintance is the more extensive, because his attention has been exclusively devoted to "real studies," and Latin has been completely deferred to the next stage.

In particular should be noticed the way in which the principle of gradation is applied. Each class-book is suited to the age of the pupils. The very name of the first, *The Violet-bed*, is intended to attract the child who comes to school for the first time, and is apprehensive that the process of learning will be dull and distasteful, while the course of instruction for the fifth year is but a more advanced edition of that for the third.

In spite of the practical tendency of the age, a tendency strongly exemplified by Comenius himself, the study of Latin still remained the chief factor in the school curriculum. Nor was this altogether without reason. Apart from its philological value, Latin was the gate through which alone the world of letters could be entered, and the student who could talk and write in the tongue of Cicero possessed a means of communication with kindred spirits throughout the world, unequalled in universality by any

language of the present day. It is true that Latin no longer tyrannised over the intercourse of the learned to such an extent as in the previous century. The Reformation had ousted Latin from the services of the Reformed Church. In every country the vernacular was beginning to assert itself, and the establishment of the Academia della Crusca at Florence in 1582, and of the Académie Française in 1637, showed that the instinctive movement in this direction was becoming thoroughly self-conscious.

But this modernising breeze had not yet stirred the dust on the school-room benches. Latin was still the chief subject taught, though the high estimation in which it stood was shown rather by the time devoted to it than by any successful efforts to teach it rapidly and well. Attempts had been made, and many of them, to render the path of the beginner easier, and it was no longer necessary for him to sit down to the task of finding his way through Terence with no other assistance than that given by an ignorant usher; but none of these attempts had attained any genuine result, and there was still no suitable class-book from the study of which could be obtained a fairly comprehensive vocabulary and a knowledge of the structure of sentences sufficient to enable a boy to attack a classic author on his own account.

To the composition of such a class-book Comenius applied himself in 1628,¹ and the result of his efforts was the publication in 1631 of his *Janua Linguarum Reserata*, or *Seminarium Linguarum et Scientiarum Omnium*. This book, as an introduction to the study of Latin, was an immense advance on anything that had yet appeared. Its method of construction, however, was not original, as the idea had already suggested itself to two pedagogues, the one Elias Bodin, and the other William Bath, a member of the Jesuit College at Salamanca.

With Bodin's scheme Comenius had been familiar since 1627, and from it he doubtless borrowed the essential features of the *Janua*. Bodin's suggestion was as

¹ *Op. Did. Omn.* ii. 82.

follows: seventeen hundred of the most useful words were to be skilfully arranged in sentences of a kind calculated to impress themselves indelibly on the memory of the student, and by a careful perusal of these a comprehensive knowledge of the language was to be obtained before any classic author was attempted. Such a book, says Bodin, would be of great use, and he expresses a wish that some competent scholar may undertake the task.

Of the existence of the other work Comenius only became aware after the plan of his own *Janua* had taken a definite shape in his mind. On acquainting his friends with the scheme, one of them told him that such a book, under the title *Janua Linguarum*, had already been written by some Jesuit priests in Spain.¹ He lost no time in procuring the work, but found that while it proceeded much on the lines proposed by him, its execution was so imperfect as to minimise its educational value.

Of this contribution made by Spain towards the scholastic needs of the day, Comenius gives a full account,² and the book itself is worthy of notice. Originally conceived by William Bath, it had been written by him in conjunction with his brother, John Bath, and an Irishman named Stephen. William Bath died at Madrid in 1614, but his work survived him. A Prussian nobleman, when travelling in Spain in 1605 in the company of some Englishmen of good birth, had made the acquaintance of Stephen, who displayed to him his new and infallible method of teaching Latin. Struck by the merit of the book, he took a copy with him, and, on the return of the party to England, had it published in 1615 with a French and an English translation attached. Though imperfect, it supplied a manifest demand, and was shortly afterwards republished at Strasburg by Isaac Habrecht with the addition of a German translation. Still finding favour, it was again brought out by Gaspar Scioppius at Milan in 1627 in Latin and Italian under the title of *Mercurius Bilinguis*,

¹ *Op. Did. Omn.* i. 250.

² *Ibid.* ii. 81.

and again at Basle in 1636 under the title of *Mercurius Quadrilinguis*, the latter edition being in Latin, German, Greek, and Hebrew.

The work carried into effect the scheme suggested by Bodin. All the principal words in Latin were arranged in 1200 sentences. Each word, with the exception of auxiliary verbs and connecting particles, only occurred once, and, by a careful study of the whole, Latin was to be learned in an incredibly short time. As Isaac Habrecht remarked, the book was a kind of Noah's Ark, in which all the important words were grouped together, and the necessity of reading voluminous authors in order to find them was obviated.

The book was so very faulty that its undoubted success points to the very great demand that existed for any practical method of teaching beginners. Many of the most important words were altogether omitted, and others that were included were uncommon and quite unsuited for the young. No care was taken to use the words in their root-signification, and the sentences themselves, far from possessing any educational value, were so ill-conceived¹ as to make it scarcely credible that the book had been translated into eight languages by 1629.²

From this work, therefore, Comenius borrowed nothing but its name, the *Gate of Languages*, and, indeed, his own attempt showed so much originality that it would be unfair to hint that he was indebted to his predecessors for the chief points in its construction.

The Grammar School, as Comenius found it, was as far removed as possible from the spirit of scientific observation. Boys were set to translate crabbed authors by the help of still more crabbed commentaries, and might easily acquire a fair knowledge of Latin without having any acquaintance with the objects to which the Latin words referred. The

¹ Comenius gives the following examples :

623. Vadem in ergastulo clam confectum comperi.

953. Has dictionum telas posthumus nevit.

Op. Did. Omn. i. 252.

² *Ibid.*

professed object of Comenius was to write a book for beginners in Latin, but the bent of his mind was too practical, and his love of the "real" too pronounced, to allow him to work out in detail a class-book that could produce nothing but superficial literary knowledge. With Spencer and the modern Realists he believed that for training of any kind—intellectual, moral, or religious—the study of surrounding phenomena was immensely superior to the study of grammars and lexicons.¹ But grammar could not be ousted from the schools, and the study of the classics, that in some schools even now takes the giant's share of the energy devoted to secondary education, was the only subject to which any serious attention was given. A compromise had therefore to be made, and the elements of Latin became the medium through which an accurate knowledge could be obtained of the world and of the function played by the various objects met with in daily life.

The material with which he started was about 8000 of the most common Latin words, which he arranged so as to form 1000 sentences. At the beginning of the book these were short and simple to suit the stumbling efforts of the beginner, gradually becoming complex and involving more difficult constructions towards the end. Each word was used in its root-signification, and, with the exception of particles like *et*, *sed*, *quia*, etc., only occurred once in the whole work. In the formation of the sentences care was taken to bring out the differences that existed between the vernacular, Czech in the first instance, and Latin, while no grammatical construction of importance was omitted.

The scientific side of the work was accentuated by its division into one hundred sections or chapters, each dealing with some one class of phenomena in nature, art, or society, such as fire, diseases, trade, arithmetic, learned conversation, and angels.

¹ Spencer, *Education*, ch. i.

Sec. 36. *Of Gardening* gives a good idea of the nature of these sentences.

36. *De Hortorum Cultura*

379. Hortus, vel pomarium est vel viridarium vel vivarium.

380. Sepitur vel aggere, vel macerie, vel plancis, vel sepe palis [sudibus] longuriis aliisque vitilibus plexa.

381. Hortulanus [olitor] ligone, et rutro, bipalioque fodit, et per pulvinos semina spargit.

382. Arborator seminario vel taleis vel viviradicibus consisto [concinnitas est et elegantia si per quincuncem digerantur] surculos inserit et rigat, scalproque germina putat, stolones amputat.

383. Oleum ex olivis exprimitur; subtus amurca fudit, fraces abjiciuntur.

384. Aviarius alvearia curat, ceramque liquat.

The sec. *Of Constancy* shows how abstract subjects are treated.

92. *De Constantia*

897. In honesto instituto immoti persistere, constantiae est, non perseverare levitatis.

898. Sed heus tu, aliud est constantem, aliud pervicacem esse.

899. Si quis ergo meliora suadet aut dissuadet, adhortatur vel dehortatur, ne sis contumax, ne præfracte repugna, nec obstinate contradic, sed obsequere.

900. Verum si quis te in bono labefactat, obfirma animum et obstina, usque dum perrumpas obstacula: rata enim irrata reddere dedecet.

The reader will at once ask himself if it could be possible to teach a boy Latin from a book constructed on such a plan. The first of the illustrations given above contains a number of words by no means easy to remember, and each of these is only used once. If the student found that a word or a construction did not stick in his memory his only resource was to go over the sentence again; and

to learn the same word repeatedly in the same juxtaposition would wear out the patience of the most diligent pupil. A modern writer who wished to construct a book of this kind would proceed on the assumption that a very limited number of words must be repeated as often as possible, so that each, by dint of its perpetual recurrence, may impress itself on the mind. Of the great principle of iteration Comenius was well aware; indeed he lays special stress upon it,¹ and it is therefore the more surprising that in this instance his practice runs directly contrary to his theory.

Whatever the shortcomings of the book may have been, and Comenius fully realised that it had many,² its success was extraordinary. No one was more surprised than the author himself at the triumphal procession that it made through Europe.³ It was translated into twelve European languages—Latin, Greek, Bohemian, Polish, German, Swedish, Belgian, English, French, Spanish, Italian, and Hungarian, and even travelled as far eastward as Asia, where it appeared in Arabic, Turkish, Persian, and Mongolian. For the existence of many of these translations we have only the author's word,⁴ but it is an undoubted fact that in every European country generations of children thumbed the *Janua* and no other book until they were sufficiently advanced to begin Terence or Plautus, and that for years after its publication Comenius's name was familiar in every school-room.⁵ Even Bayle, who is little disposed to sympathise with Comenius, confesses that the *Janua* met with marvellous success. “Had Comenius written

¹ *Did. Mag.* chap. xviii. sec. 43.

² *Hic, inquam, scopus fuit, quem attigisse tantum abest ut glorie, ut primus etiam defectus agnoscam et confitear.*—*Op. Did. Omn.* i. 254.

³ *Factum est, quod futurum imaginari non poteram, ut puerile istud opusculum universalis quodam eruditissimi Orbis applausu fuerit acceptum.*—*Ibid.* iii. 381.

⁴ *Ibid.* iii. 381. Beeger says that a manuscript translation into Turkish by Ali Beg, and dating from 1650, exists in Paris.

⁵ *Evelyn's Diary*, 27th January 1658: “My deare son Richard died. He had before the fiftie yeare learned out Puerilis, got by heart almost the entire vocabulary of Latin and French primitives and words, could make congruous syntax, turn English into Latin . . . and had made a considerable progress in Comenius's *Janua*.”

no other book than this he would have rendered himself immortal. The work was reprinted countless times, and was translated into I know not how many languages. There are several polyglot editions. I do not doubt that Comenius speaks sincerely when he admits that the success of the work surpassed anything that he anticipated, for who would not be surprised that such a book should have been translated into twelve European languages.”¹

The approval bestowed on the *Janua* was not quite universal. Some critics refused to believe that the new method of teaching Latin was a whit superior to the old, or, quite overlooking the educational value of the matter, directed their remarks against the style, which they said was bad, and the Latinity, which they considered faulty.

Milton in his *Tractate on Education* dismisses the book with a contemptuous remark,² and Adelung, writing a hundred years later, quotes with approval the criticism, “In vain will the beginner look for the result that its author claims from the use of the *Janua*.³ Adelung himself goes so far as to assert that its universal use would have been the surest way of restoring the barbarous Latin of the Middle Ages (die Barbarey der mittleren Zeiten).⁴

In truth, these criticisms of Comenius’s Latinity are beside the point. He was no great scholar (in comparison with men like the Scaligers and Casaubon he was none at all), and his text-book would not be approved of by present-day reformers, but it evidently commended itself to the teachers of his time, and his claim on the historian of education lies in the fact that he rescued the boys of his generation from the sterile study of words and introduced them to the world of mechanics, politics, and morality.

¹ Bayle, *Dictionnaire historique et critique*, Rott. 1697, i. 882.

² “To tell you therefore what I have benefited herein among old renowned Authors, I shall spare; and to search what many modern *Januas* and *Didacties* more than ever I shall read, have projected, my inclination leads me not.”

³ Adelung’s *Geschichte der menschlichen Narrheit*, Leipzig, 1785, p. 205.

⁴ *Ibid.* p. 222.

The publication of the *Janua* and the success with which it met brought Comenius into contact with many of the most striking and influential men of the day. In England in particular the book had been well received, and an English version, brought out shortly after its publication at Lissa in 1631 under the title *Janua Linguarum Trilinguis*, at once attracted the attention of Samuel Hartlib.¹ Of German origin, Hartlib resided in London, and took a keen interest in everything that savoured of intellectual progress. The friend of Milton and of Evelyn, he formed the centre of a circle of thinkers to which any foreigner who arrived in England readily found access, and, in spite of his many engagements at home, contrived to keep up a correspondence with men of mark in Europe. At the beginning of 1632, greatly struck by Comenius's didactic venture, and especially by its Encyclopaedic features, he sent him a friendly message with a copy of Streso's *Of the use and abuse of reason*. He also hinted that it might be possible to procure him some monetary aid in England to enable him to carry on his work with greater ease.

Comenius, in answering, expressed his satisfaction at the approval with which his efforts had been received. Any pecuniary assistance would be useful. At the moment he was being aided by the Palatine of Belz, but, as he was travelling, the funds came in but slowly. He was getting on with his didactic works as fast as possible, as there would be much to do when the Brethren were allowed to return to their labours in Bohemia.

As a matter of fact his scholastic work was to be interrupted. A Latin Grammar that he wrote in 1631² had not satisfied him, and for the next few years he devoted himself to history and physics. The Synod of the Brethren that sat in 1632 asked him to write an account of the events that had befallen the "Unity," and this request caused him to compose his *History of the Bohemian Brethren* and

¹ For information about Hartlib I am indebted to *Samuel Hartlib, a biographical memoir*, by H. Dircks, 1865.

² "Grammatica latina legibus vernaculæ concinnata." Not preserved.

his *History of the persecutions of the Bohemian Church*, the latter of which was not published till 1648.

But most of his attention was given to the composition of his treatise on physics. This work, which appeared at Leipzig in 1633,¹ is a most curious publication, and, as Comenius always based his didactic laws on the operations of nature and on the fundamental principles that underlie the constitution of the universe, it is on this account worthy of special attention.

The scope of the work will be best illustrated by the headings of the individual chapters, twelve in number.

1. Sketch of the creation of the world.
2. Of the invisible principles of the world.
3. Of motions.
4. Of the qualities of things.
5. Of the changes of things.
6. Of the elements.
7. Of vapours.
8. Of concrete substances.
9. Of plants.
10. Of animals.
11. Of man.
12. Of angels.

In writing a Christian Cosmogony, Comenius was to a large extent following precedent. Valesius, Lambartus, Levinus, Oscalus, Kasmannus, and his own tutor Alsted had done so before him, and had made the same effort to combine the desire for scientific progress on inductive lines and the belief that the truth on every subject, scientific or otherwise, is to be found in the Scriptures.

For the production of works of this kind the curious conflict of ideas at the close of the sixteenth century was responsible. The spirit of free inquiry introduced by the reformed religion had to a large extent overthrown the authority of Aristotle, but the Christian philosophers of the

¹ 'Physicæ ad lumen divinum reformatæ synopsis philodidactorum et theodidactorum censuræ exposita.'

period merely substituted the Bible for the Aristotelian physics, based their theories on arguments drawn from the Mosaic account of the Creation, and, while they were half awake to the value of experimentation, had but little dealing with it in the actual development of their hypotheses.

The great representatives of these conflicting strains of thought were Campanella and Bacon, for both of whom Comenius had a profound admiration.¹ The two books of the *Novum Organum* had appeared in 1620, and in the same year Campanella's *De sensu rerum et magia* was published at Frankfort, where his *Prodromus Philosophie* had been published three years previously. These three works were read with great interest by Comenius; but, while he had a great regard for Bacon and alludes to him continually, he remained in reality little affected by the Inductive Philosophy. Though dimly conscious that Bacon was on the right path, and attracted by the notion of penetrating to the inmost essence of things,² he was but slightly impressed by the experimental side of the question. In his *Great Didactic*, which professes to be founded on an analysis of natural processes, he never mentions Bacon's name, and his method of procedure is based almost entirely on analogy, often of a far-fetched nature.

While Bacon was not free from the fantastic notions of his age, Campanella is their representative, and with him Comenius has far more in common. "I could easily show that our Prometheus stole a large part of his false beacon-lights from Campanella's heaven," wrote Des Mares in 1668,³ and, though he was no friendly critic, it must be confessed that his appreciation was a just one. We need not be surprised, therefore, to find Comenius dealing with essences, principles, and similar monstrosities of mediæval

¹ Campanellam et Verulamium, philosophiæ restauratores gloriosos. Pansophici Libri Delineatio.—*Op. Did. Omn.* i. 442.

² Verulamius mirabili suo organo rerum naturas intime scrutandi modum infallibilem detexit.—*Ibid.* i. 426.

³ Facile ostenderem nostrum Prometheum magnam partem suorum ignium fatuorum ex illius celo suffuraturum fuisse.—*Antirrheticus*, p. 37 (quoted by Bayle).

Physics. For his cosmogony he rests on the authority of Genesis. The world is created out of the three principles of Matter, Spirit, and Light. The qualities of things are Consistency (salt), Oleosity (sulphur), and Aquosity (mercury). Plants are endowed with "vital spirit," while animals are distinguished from them by the power of originating movement and by the possession of "animal spirit." Man consists of Body, Spirit, and Soul.

Comenius wrote his Physics under the inspiration of Campanella; but he differs from his master on certain points. As substratum for his philosophy Campanella had taken the existence of two principles, cold and heat. Alsted also had imagined two principles, heaven and earth, the first active and the second passive. According to Comenius this duality is inconsistent with the harmony that exists in nature. Whenever two opposing principles meet we find nothing but strife, and a Trinity of cosmic principles is therefore necessary to account for the peaceful working of the universe. In introducing this Trinity he was doubtless influenced by a desire to make the Christian Trinity harmonise with the basis of natural phenomena, but in reality he is only returning to the fancies of Paracelsus, who had already originated the conception of salt, sulphur, and mercury as a Cosmic Triad. What part Comenius made these principles play in the Astronomy¹ that he published at the same time as the Physics, it is impossible to say, as the book has unfortunately been lost.

The writing of school-books was now once more to occupy his attention. The *Janua* had proved too difficult for the boys who entered the Latin School, and to meet their wants the *Vestibulum* or *Entrance Hall* to the *Janua* was composed.² His first intention was to write some dialogues for boys to make them familiar with the Latin language,³ but he decided to preserve the form of the

¹ 'Astronomia ad lumen physicum reformanda.'

² 'Januae Linguarum reseratae Vestibulum quo primus ad Latinam Lingua aditus Tirunculis paratur.'

³ *Op. Did. Omn.* i. 303.

Janua that the book might serve the better as an introduction to it. He selected about 1000 of the most common Latin words, and out of them constructed 427 sentences. These are very simple throughout, as the following examples will show:—

Chapter I

De accidentibus rerum

6. Deus est æternus, mundus temporarius.
7. Angelus immortalis, homo mortalis.
8. Corpus visibile, spiritus invisibilis, anima itidem.
9. Cœlum est supremum, Aer medius, Terra infima.

Chapter IV

De rebus in Schola

246. Scholasticus sponte frequentat scholam, quo in artibus erudiatur.
247. Initium est a literis.
248. Ex syllabis voces componuntur, e dictionibus sermo.
249. Ex libro legimus tacite, aut recitamus clare.
250. Involvimus eum membranæ et ponimus in pulpito.
251. Atramentum est in atramentario.

The preface contains instructions for the book's use. It is first to be read through twice, and then the boy is to commit the sentences to memory, learning two or three in an hour and repeating them to the master. Each sentence is to be translated to the pupil before he reads it, that he may have no difficulty in making it out. The declension of nouns is to be taught as the boy makes his way through the book; nouns and adjectives should be declined together as *Deus æternus*; *Mundus temporarius*. As a help to recollecting the case-meanings the following table is given:—

1. Ecce Tabula nigra.
2. Pars Tabulæ nigræ.
3. Addo Partem Tabulæ nigræ.
4. Video Tabulam nigram.
5. O tu Tabula nigra.
6. Video aliquid in Tabula nigra.

The *Vestibulum* met with considerable success, and, though never as popular as the *Janua*, was published in English, German, Hungarian, and Swedish.

Having once started theorising about the physical constitution of the universe, Comenius carried his train of thought still farther than in the *Physics*. He had already enabled the "studious youth" to take an external survey of natural objects by means of the *Janua Linguarum*, he would now introduce him to their essential nature,¹ and with this end in view began to compose a *Gate of phenomena or doorway to wisdom* ;² the work to be a kind of small Encyclopædia or hand-book of universal knowledge.³ Some friends with whom he had discussed this project now visited England, and excited so much interest by the reports that they brought of the Pansophistic work on the stocks, that a "worthy man" (probably Hartlib) wrote to him and asked for a slight sketch of the projected treatise. Comenius obligingly complied with the request and sent him a short manuscript entitled *Outline of my work on Universal Wisdom*.⁴

Imagine his surprise, when the manuscript intended for his friends' eyes alone was returned to him in print.⁵ Still, although publication had been far removed from his intention, he could not but recognise the advantage of sounding public opinion and seeing what the learned world thought of the issue of a work on such ambitious lines. As a feeler,

¹ Quid per essentiam suam res quæque sit.—*Pansophici Libri Delineatio*, i. 403.

² Janua rerum sive Sapientiæ porta.—*Ibid.*

³ Encyclopædiolam seu Pansophiolam.—*Ibid.*

⁴ 'Pansophici Libri Delineatio.'

⁵ 'Conatum Comenianorum Præludia. Oxoniæ, excudebat Gulielmus Turnerus.'

the *Prelude to the efforts of Comenius* served its purpose admirably. "Every corner of Europe is filled with this pansophic ardour," wrote John Adolphus Tassius, Professor of Mathematics at Hamburg, in a letter to Hartlib; "if Comenius were to do no more than stimulate the minds of all men in this way he might be considered to have done enough."¹ On all sides opinions were freely expressed. Some went so far as to say that no greater benefit had been bestowed on the human race since the revelation of God's Word, and called upon Comenius to finish his work. Others said that the task was too great for one man, that collaborators must be found for him, and that a Pansophic College should be established. In some quarters, on the other hand, the book was openly derided, and in Poland it met with strong disapproval from those who said that it was a dangerous experiment to mix things divine with things human, Theology with Philosophy, Christianity with Paganism.

This conflicting criticism made Comenius a little uncertain, and for the moment he discontinued his work. First, however, he wrote a further *Explanation of my Pansophic efforts*,² to reassure those who saw any impiety in his design.³

In the conception of a comprehensive Encyclopædia there was nothing new. As early as 1264 Vincent of Beauvais had collected the entire knowledge of the Middle Ages in three volumes, while Alsted's great work, published in 1630, performed the same office for the seventeenth century. Even while Comenius was engaged on his *Delineatio*, a new Encyclopædia, that of Peter Laurenberg, appeared, under the title *Pansophia*. Needless to say, he obtained and read it eagerly, but found that it was not the kind of work he had in view, "since it said nothing of Christ, the fount of true wisdom, and nothing of the life to come."⁴

¹ *Op. Did. Omn.* i. 455.

² 'Dilucidatio Conatuum Pansophicorum.'

³ An English translation of the *Delineatio* and *Dilucidatio* was brought out by Hartlib in 1642, under the title 'A reformation of schooles, designed in two treatises.'

⁴ *Op. Did. Omn.* i. 458.

The *Janua Rerum* was in the first instance to give a synopsis of natural phenomena in the same way that the *Janua Linguarum* did of the Latin language, but its construction was to be quite different from that of the Encyclopædias in use. "Even the best-arranged Encyclopædias that I have so far seen have been more like a chain containing many links well fastened together than like an automaton whose wheels are cunningly contrived so that the whole can set itself in motion."¹ This defect can be obviated by disposing the arts and sciences in such a manner that we may begin with what we know best and proceed by slow degrees to what is less familiar. In this way the first chapter will throw light on the second, the second on the third, and so on.² The essential point is that the universal laws of thought be taken as a basis, and that then, by sound processes of reasoning, some universal way be opened to ascertaining the truth of things.³ It is by neglecting to find this universal principle and by limiting themselves to one subject that physicists and philosophers in general have fallen into so many errors and contradictions. The hypotheses of Copernicus are plausible, it is true, but quite inconsistent with the laws of physics. Gilbert, totally absorbed in the study of magnetism, has tried to base his whole philosophy upon it, and here again has offended against the true principles of nature.⁴ Campanella's views met with some approval, but were overthrown by the telescope of Galileo Galilei. These contradictions cannot be avoided "unless the rays of truth that are scattered through all things meet together in one spot, so that the same symmetry may be evident in all that appertains to the senses, to the intellect, and to divine

¹ *Delineatio*, sec. 39.

² *Ibid.* sec. 24.

³ *Ibid.* sec. 26. Ut per universalissima cognoscendi principia, eosque ad ultimas usque conclusiones rite deducendi modos, universalem aliquam veritati rerum cognoscendæ aperiret viam.

⁴ *Ibid.* Gilbertus magnetis speculacione abreptus totam Philosophiam ex magnete deducere voluit: sed evidentissime cum injuria principiorum Physicorum.

revelation. These are the three channels through which knowledge comes to us, and error will cease if the balance between them be preserved."

For a moment Comenius seems to lay more stress on the materialistic side, and tells us that "Universal Wisdom" should reduce all things to number, measure, and weight; a process of meting out nature with a foot-rule for which he dutifully finds authority in Scripture (Wisdom ii. 20).¹ But he soon recedes from the commonplace conception of accurate measurements. Bacon, he says, seems to have discovered the necessary method of separating the true from the false by his system of "artificial induction"; but this process takes too long, requiring generations of effort, and, besides, it is useless for the construction of Pansophia, since it deals only with natural phenomena, while Pansophia treats of the whole universe.²

Very different are the laws or norms by which universal knowledge is to be obtained, and these Comenius proceeds to enunciate in eighteen aphorisms:—

1. Universal knowledge, so far as it can be obtained by man, has as its objects God, nature, and art.
2. A perfect knowledge of these three is to be sought.
3. The knowledge of things is perfect when it is full, true, and ordered.
4. Knowledge is true when things are apprehended as they exist in reality.
5. Things are apprehended in their essential nature when the manner in which they have come into existence is understood.
6. Each object comes into existence in accordance with its "idea," that is to say, in relation to a certain rational conception through which it can be what it is.
7. Therefore, all things that come into existence, whether they are the works of God, of nature, or of man, do so in accordance with their "ideas."
8. Art borrows the "ideas" of its productions from nature, nature from God, and God from Himself.

¹ *Delineatio*, sec. 40.

² *Ibid.* sec. 63.

9. In fashioning the world, therefore, God produces an image of Himself, so that every creature stands in a definite relation to its creator.

10. As all things share in the "ideas" of the Divine mind, they are also mutually connected and stand in a definite relation to one another.

11. It follows that the rational conceptions of things are identical, and only differ in the form of their manifestation, existing in God as an Archetype, in nature as an Ectype, and in art as an Antitype.

12. Therefore the basis of producing as of apprehending all things is harmony.

13. The first requisite of harmony is that there should be nothing dissonant.

14. The second is that there should be nothing that is not consonant.

15. The third is that the infinite variety of sounds and concords should spring from a few fundamental ones, and should come into being by definite and regular processes of differentiation.

16. Therefore, if we know the fundamental conceptions and the modes of their differentiation, we shall know all things.

17. Such rational conceptions can be abstracted from phenomena by means of a certain method of induction, and must be posited as the norms of phenomenal existence

18. These norms of truth must be abstracted from those objects whose nature is such that they cannot be otherwise, and which are at every one's disposal for the purpose of making experiments, that is to say, from natural phenomena.

These aphorisms constitute the philosophic basis of Pansophia. The work constructed with reference to them is to be "an accurate anatomy of the universe, dissecting the veins and limbs of all things in such a way that there shall be nothing that is not seen, and that each part shall appear in its proper place and without confusion." Great care is to be taken that terms, especially general terms,

shall be carefully defined. These general terms of Pansophia are, as it were, axioms of physics; ultimate truths that do not admit of demonstration or analysis, but only need to be illustrated by examples. They are given us from heaven; but in selecting from them great care must be taken to avoid error. The particular cases that are brought forward in the system should not introduce any new truth, but should merely consist of a special application of the general conceptions that have preceded. In this way physical investigation is to be conducted on the analogy of geometry, and developed deductively from axioms. It will be seen that Comenius, in spite of his constant praise of Bacon and his sympathy with the more fantastic conceptions of that thinker, has but little in common with his inductive philosophy. His "idea" is an echo of Plato; his "ratio" is a revival of Aristotle's logos; while his general axioms are obtained by intuition and not by any definitely planned method of induction. While granting that Bacon's "artificial induction" may be of use for the investigation of natural objects, he distinctly repudiates it for the purposes of Pansophia, since this deals with the universe, in which the supernatural is included. There are few civilising agencies of the present day that have not been ascribed to Comenius's fertile brain by his continental admirers,¹ and the attempt to link his name with that of Bacon as an inductive philosopher is backed by equally scanty evidence. As a natural philosopher he belongs to the century that preceded him and not to the age of experiment that was to follow, and his didactic principles were due rather to an extraordinary intuition of what was necessary than to patient reasoning on inductive lines.²

It is upon the conception of the universe as ordered, and of the relations that exist between phenomena as rational, that any system of education, apart from the mere inculcation of facts, must rest, and this is the truth that

¹ One commentator actually declares that the rules of Freemasonry have been taken from Comenius's writings.

² In the Preface to the *Great Didactic* Comenius expressly says that his principles were arrived at *a priori*.

Comenius brings out most strongly in his Pansophic writings. It is towards this "Universal Wisdom" that all his didactic efforts tend. The student is led from one fact to another, and, as these facts are arranged in their natural order, he is thus placed in touch with the actual cosmic processes, can follow up the train of thought, and enlarge the circle of knowledge by working on the lines indicated by the operations of nature. As result, the mature student is to be no pedant, crammed to overflowing with dry and uncoördinated facts, but a man whose faculty of original thought has been developed and whose training fits him to be an independent investigator of the universe, while since Pansophia has brought him closer to the Deity he will be not only a learned man but a moral and a pious one as well. It is thus clear that the encyclopædic learning demanded by Comenius is not an end in itself but a means towards the ultimate goal of piety. In "teaching all things to all men" he is an educator rather than an instructor. The boldness of the scheme excites admiration; but the enthusiasm evinced by Hartlib and his friends can only suggest the thought that these gentlemen had failed to appreciate that the one important point in the Baconian philosophy was the insistence on experiment and verification as a basis for sound induction.

It must not be imagined that this excursion into the region of first principles and philosophic abstractions impeded Comenius in the performance of his practical duties as a teacher. During these years (1635-1640) his activity in school-organisation was as great as ever, and the leading position that he now took in the Moravian Fraternity laid an extra burden on his shoulders. In 1635 the Synod asked him to bring out a Latin-Bohemian edition of the *Vestibulum* and of the *Janua*, and expressed its satisfaction at hearing that the learned David Bechner was working at a *Viridarium Linguæ Latinæ*, an amplification of the *Janua*. Additional labour was given by the reorganisation of the Gymnasium in accordance with the plans of Comenius, and we accordingly find him drawing

up *The rules of the renowned Gymnasium at Lissa.*¹ These are of an eminently practical character. Especial stress is laid on the need of a spirit of piety throughout the school. Rules are laid down for good behaviour in class, in the streets, and at home. Playing in the streets is forbidden, though the boys are urged to go and play outside the town, first choosing one of their number as a leader. Early rising is recommended, and all are advised to enter in a notebook anything of interest that they may learn from day to day. Dancing is strictly forbidden. "The dance is a circle whose centre is the devil"² is the portentous phrase by which the heinousness of the offence was impressed on the boys' minds.

In the following year a portion of Bechner's *Viridarium*, under the title *Proplasma Templi Latinitatis*, was completed, and was subjected to Comenius's criticism. As a writer of school-books Bechner was inferior, and the chief value of the work lies in its preface. Comenius, however, must have thought well of it, as he includes it in the Amsterdam Folio (i. 318-345).

In his preface Bechner laments that Latin is learned as a dead and not as a living language. Themistocles learned to speak Persian in a short time by going to Persia, and Ovid picked up Sarmatian rapidly by living at Tomi. Why do we not bear these examples in mind when we teach Latin? A suitable place should be set apart with its own church, school, workshops, and everything necessary for carrying on life. Here boys should be sent to school, and in this community nothing but Latin should be talked. A master must accompany each division of boys to see that the vernacular is completely laid aside. Pictures and carved models of every-day objects are to be exposed to view with their Latin names written under them that the boys may be given every opportunity of absorbing Latinity, and, in addition to this, they should act moral and instructive plays in Latin.³

¹ *Leges illustris Gymnasii Lesnensis.*

² *Chorea est circulus cuius centrum est Diabolus.* ³ *Op. Did. Omn.* i. 320.

With this last suggestion in view he takes section 5 of the *Janua*, "De Igne," and works it up into a series of dialogues of increasing difficulty, all illustrative of the nature of fire. There are five stages, the *Limen*, the *Janua*, the *Atrium*, the *Odeum*, and the *Adytum*. A short extract from the *Atrium* will suffice to show the fantastic nature of the composition. The actors are Uriel, Pyrodes, and Caius Carbo, and they elucidate the subject as follows:—

P. Quis iste concursus hominum et clangor insolens tinnitusque extra numerum?

C. Incendium excitatum est.

P. Ubi ergo exarsit?

C. In ædibus nescio cujus; in platea cui ab arce nomen factum est.

U. Atque hoc quomodo . . . ? etc.

The *Odeum* is more advanced, while the *Adytum* gives, still in dialogue form, a long philosophical and historical disquisition on fire. The idea was not new, having been already employed by the Jesuits, and the dialogues are written with no dramatic power. The work is dedicated to Comenius and his friends and well-wishers—Hartlib in London, Schneider in Leipzig, Evenius in Weimar, Mochinger in Dantzig, and Docemius in Hamburg.

In this year Comenius succeeded Henrici as Rector of the Gymnasium; but his reforming ardour was damped by the death of his friend and patron Count Raphael, over whose grave he preached a funeral sermon. This was afterwards published under the title "The mirror of good government, in which out of the prophet Isaiah, and from the example of the pious Eliakim, the true qualities of right and praiseworthy government are depicted and set forth as a model to all good rulers."

The death of their patron made no serious difference to the safety of the Brethren, as his son Bohuslaw promised to protect them as his father had done. It was for Bohuslaw that Comenius composed his *Faber Fortunæ*, *The Moulder of Fortune*. This work starts with the con-

ception of man as a free agent. We are not dependent on circumstances, but control them ; we must first, however, learn to control ourselves and thus to identify our will with the desire for the true good. Thus the art of moulding our fortunes consists in depending not on circumstances but on reason, and not on the reason of another but on our own ; that is to say, on the reason of God that works in us.

It is impossible to say how much time was devoted to the *Janua Rerum* during the last few years of Comenius's stay in Lissa. Apart from his work as a schoolmaster, his other literary productions were sufficient to fill up any ordinary man's time, and the claims made on him by admirers in other towns and countries increased daily. In 1637 a request was addressed to him from Breslau asking him to write some hints on school-teaching for the Gymnasium in that town. With this demand he complied in his *De sermonis Latini studio dissertatio*. It is interesting as being the first published work of Comenius that dealt with school organisation in a philosophic spirit.

The treatise opens with a dedicatory verse by George Bechner, in which the author is ranked above Epictetus.¹ After some general remarks on the importance of a knowledge of facts—"Verba sine rebus, putamina sunt sine nucleo, vagina sine gladio, umbra sine corpore, corpus sine anima"—Comenius proceeds to divide the Latin School into four classes, each of which is to have its own book. The first and second classes are to be provided with the *Vestibulum* and the *Janua*, whose acquaintance we have already made ; while for the two more advanced classes he suggests the compilation of two other books, *The Palatium* and *The Thesaurus*. The *Palace* is to be divided into four parts—"The Palace of Letter-writing," "The Palace of History," "The Palace of Oratory," and "The Palace of Poetry." "The Palace of Letter-writing" is to contain a hundred letters corresponding to the hundred divisions of the *Janua*. The style is to be varied, and a few general remarks on letter-writing are to be added. "The Palace

¹ Cedat Epictetus nomen tibi, clare Comeni.—*Op. Did. Omn.* i. 348.

of History" is to consist of dialogues embodying historical information about the objects mentioned in the *Janua*. "The Palace of Oratory" is to repeat the same material in oratorical form, the phrases used being adapted from Cicero, Quintilian, and Seneca; while the "Palace of Poetry" deals with the same subjects treated in verse. The verses are not to be original, but are to be taken from the classic poets. In this way Ross¹ in England had written a life of Christ with lines taken from Vergil.

The culminating point in this series of graduated school-books is the *Thesaurus*. This is a collection of extracts from classic writers dealing with the subjects of the *Janua*. For all these books suitable lexicons are to be compiled, and a Latin grammar is to be written for use with the *Janua*. As a further assistance to the use of the *Thesaurus* he proposes a *Clavis Intellectus Humani*,² in which the subject-matter is to be arranged in "a certain general proportion" with reference to the relation in which things, the concepts of things, and language, stand to one another.

These books are to be spread over the six years devoted to the Latin School as follows: for the *Vestibulum* six months is sufficient, and for the *Janua* a year; for the *Palatium* a year and a half is allowed, leaving the remaining three years for the study of the authors.

Then follow some general remarks on teaching, after which come some special rules for the use of the class-books.

From the use of the *Vestibulum* the boy must learn to read Latin words with the proper accent and to write what he knows with fluency; he is also to master the rudiments of grammar and syntax. As a help to writing, some of the Latin sentences should be printed faintly (green is recommended as a suitable colour), and over this the boy may write in black ink.

The *Vestibulum* is to be read through ten times, and

¹ Rossæus Anglus.—*Op. Did. Omn.* i. 357. I have been unable to obtain any further information about this scholar.

² This he further on identifies with the *Janua Rerum*.—*Op. Did. Omn.* i. 362.

each time stress should be laid on some fresh point. By the ninth reading it should practically be known off by heart. Great stress is laid on the importance of employing the morning hours for learning, and the afternoon for reading and writing. Similarly, the *Janua* is to be read ten times, the tenth reading being a kind of Latin disputation in which the winner gets a prize.¹

In the following year (1638) an invitation came from Sweden asking Comenius to undertake the reformation of the schools in that country. He refused. The task, he said, was too great for one man, and he foresaw nothing but envious opposition from the local schoolmasters.

But although he did not leave Lissa, it was brought home to him how much schools all over Europe were in need of reformation, and he was induced to commence the translation of *The Great Didactic* out of Czech into Latin. The headings of the chapters he communicated to Hartlib, who published them in 1642 as an appendix to his *Reforme of Schooles*. In other directions his literary output was as great as ever. To these years belong two plays, *Diogenes Cynicus redivivus* and *Abrahamus Patriarcha*, which were acted by the students of the Gymnasium.

To the interest excited by his philosophic schemes we have alluded in our account of the *Prodromus*. This interest continued to increase, and Comenius, who had come to Lissa in 1628, known merely as a member of a little band of Bohemian exiles, with sensible views on the teaching of Latin, began to realise that he had achieved European notoriety and that any country would be glad to secure his services. Much of his renown was probably due to the enthusiasm of Hartlib, who was in correspondence with a large number of intellectual men both in England and on the continent. Pell, an English mathematician and the friend of Hartlib, was in communication with Mersenne in France; Mersenne had written to Comenius on the subject of his Pansophic schemes, and Descartes himself, an old school-fellow and friend of

¹ *Op. Did. Omn.* i. 348-393.

Mersenne, had expressed his approval of them, though hitherto he knew of them only by hearsay.¹

Comenius thus began to feel that the walls of the Lissa Gymnasium formed a limited horizon, and one beyond which his personal influence might with great advantage be extended. Many causes worked together to make him dissatisfied with his position. The death of Count Raphael in 1636 and of his old master Alsted in 1638 had taken from him two of his best friends. Enemies, envious of his success, had worked upon the distrust that his brothers in the faith could not refrain from evincing towards his scientific efforts, and had accused him before the Synod of displaying irreverence in his Pansophic writings. Count Bohuslaw had seceded from the Evangelic party and embraced the Catholic faith, and seems to have given an unsatisfactory reply when Comenius (in 1640) laid before him his further schemes for scholastic and pansophic works. It is therefore not surprising that he yielded to the pressing demands of Hartlib and, having first obtained leave from the Unity, set out for England.

It was after a most unsatisfactory voyage, during which he had been carried by a storm into the Baltic, that he reached London in the September of 1641; but, once there, he was received with open arms by the little band of which Hartlib was the centre.²

A man of great enthusiasm but of less judgment, Hartlib knew everybody in England who was worth knowing. "I could fill whole sheets," he wrote to Worthington,³

¹ De modo autem speculum ejusmodi conficiendi, naturæ maxime consentaneus ille videtur (quem et Comenium hac de re libros mundi utriusque Majoris nimirum et Minoris cum libro Scripturæ, ut audio, potissimum consulentem sibi eligere conjicio) qui Vestigia Creatoris in producendis rebus accuratissime observet, ita ut ex rationis lumine primo probetur; necessario concedendum esse rerum conditorem et Deum, deinde Creaturæ eo pertractentur modo, quo Moses eas in Genesi sua procreatæ luculenter descripsit.—Excerpta Literarum, J. Duræi, 1638. MS. Sloane, Brit. Mus. 417.

² For a most interesting account of Comenius's visit to London and his relations with Hartlib, see *Pioneers of Modern Education 1600-1700*, by Prof. J. W. Adamson, 1905, ch. v.

³ Dr. John Worthington, Master of Jesus College, Cambridge.

"in what love and reputation I have lived these thirty years in England ; being familiarly acquainted with the best of archbishops, bishops, earls, viscounts, barons, knights, esquires, gentlemen, ministers, professors of both Universities, merchants, and all sorts of learned or in any kind useful men." Himself a voluminous author¹ and translator, he was ever on the look-out for talent in need of assistance, and was rapidly getting through his fortune in the promotion of every Utopian scheme that came under his notice. It was to him and at his request that Milton addressed his essay *Of Education* (1644).

At this time in easy circumstances he was living in Duke's Place, Drury Lane, an address which we may be sure was the centre of Comenius's London experiences. Here would have met to discuss the intellectual and political problems of the day men like Theodore Haak, John Durie, John Beale, John Wilkins, John Pell, and Evelyn, who had just returned to London after a three months' journey through Europe. Milton was living in London, and must certainly have met and conversed with the illustrious stranger ; while no farther off than at Seven-oaks was Thomas Farnaby, a very remarkable English schoolmaster, who had evinced his interest in the *Janua* by prefixing a short Latin poem to Anchoran's edition of 1631.

It was a strange society to which Comenius was introduced. Haak was a naturalised Dutchman who had been ordained deacon in 1634 by Hall, Bishop of Exeter. He it was who in 1648 suggested the meetings of learned men that eventually led to the formation of the Royal Society. To No. 5 of Hooke's philosophical collections he contributed the criticisms of Marin Mersenne and of Descartes upon Dr. John Pell's *An Idea of Mathematics*, and according to Anthony à Wood, translated half of *Paradise Lost* into High Dutch.

¹ He wrote among other works 'An essay for the advancement of Husbandry-learning : or proposition for the erecting of a College of Husbandry' (1651) ; 'The advice of W. P. (Sir William Petty) to Mr. Sam. H. for the advancement of some particular parts of learning' ; and a pamphlet entitled 'An invention of Engines of Motion.'

John Durie, the son of Robert Durie, minister of the Scotch Church at Leyden, had been educated for the ministry at Sedan under Andrew Melville, and also at Leyden and Oxford. A great advocate of Evangelical unity, he was continually employed on semi-religious embassies. Recently ordered out of her country by Christina, Queen of Sweden, he was now in London without any definite occupation. Two years later he obtained the post of Keeper of the books, medals, and manuscripts of St. James.

John Beale, afterwards rector of Yeovil in Somersetshire, and chaplain to Charles I., was, like Hartlib, an agricultural enthusiast, and wrote, among other things, *Aphorisms concerning Cider*. Hartlib, writing to Boyle in 1658, says of him: "There is not the like man in the whole island nor in the continent beyond the seas so far as I know it—I mean that could be made more universally use of to good to all, as I in some measure know and could direct."

John Wilkins, afterwards Bishop of Chester, was ready to entertain any absurdity as long as its aim was philanthropic. He was the author of some curious works, including *Discovery of a New World* (1638), a description of communication with the moon by means of flying-machines, and *Mercury, or the secret and swift messenger, showing how a man may with privacy and speed communicate his thoughts to a friend at any distance*.

Last comes Dr. John Pell, a mathematician of no mean order. He had published his *Commentationes in Cosmographiam Alstedii* in 1631, and had doubtless many a conversation with Comenius about the character and parts of his old master.

Such was the circle in the midst of which Comenius found himself, and much further our acquaintance with the details of his visit does not go. He was delighted with London. To his friends in Lissa he writes with enthusiasm of the preachers, the libraries, and the anxiety displayed for school reform.

"I live," he says in a letter dated the 18th of October, "as a friend among friends; though not so many visit me as

would do so if they knew that I could speak English, or if they had more confidence in their own Latin, or if they had not such a high opinion of me."

This shyness on the part of callers gave him plenty of time to talk over plans with his friends. He had not arrived at a fortunate moment; the king had gone to Scotland, Parliament had risen for three months, and nothing remained but to stay in London for the winter and unfold to Hartlib and his circle¹ the sketch, such as it was, of his Pansophic system. His leisure time he employed in the composition of a new work, entitled *Via Lucis*,² which was, however, not published until the year 1668 in Amsterdam.

Uppermost in the minds of Hartlib and his friends was the formation of a Universal College for physical research, on the lines suggested by Bacon in the *New Atlantis*. Now at last in Comenius they thought they had discovered a man competent to found a "Solomon's House," if only sufficient assistance were given him by Parliament. This was their chief object in urging him to come to England, and it was on the establishment of the college that the conversation turned. As we have seen, Comenius was totally unfitted to organise a collection of laboratories for physical research—for that was what the proposal practically amounted to. He was, as he himself confesses, primarily a theologian, and, though he could talk glibly and attractively of enlarging the boundaries of human knowledge, he had no conception of the tedious processes of experimentation that were necessary, and flew off to vague generalisations at every opportunity. If proof was necessary, he supplied it from the Scriptures, and as a means for verification valued a text from Genesis more than all the paraphernalia of the chemist and the physicist.

The *Via Lucis*, while much of it is of that fantastic

¹ Amicis apparatus Pansophicum (quam tenuis fuit) lustrantibus.—*Op. Did. Omn.* ii. preface.

² 'Via Lucis. Hoc est, Rationabilis disquisitio, quomodo intellectualis animorum lux, Sapientia, tandem sub mundi vesperam per omnes mentes et gentes feliciter spargi possit.'

nature that we have already noticed in Comenius's Pansophic writings, contains some points that are both new and interesting. The term "light" is taken to signify the millennium of learning to be attained by Pansophic methods, though at the same time the physical phenomenon of light is dealt with and its nature declared to consist of waves or motion (chap. ix.). This "light" is to be obtained by means of four things—universal books, universal schools, a universal college, and a universal language (chap. xv.). The universal college is to consist of men chosen from the whole world. These must be gifted, industrious, and pious, and their task is to further the welfare of mankind and extend the limits of knowledge in every way. England is a suitable place in which to found this college, partly because its position renders communication easy with the whole world, partly in memory of Bacon, and partly because it has offered to found the college and supply it with funds.

More important than all is the foundation of a universal language. Vives had suggested Latin, but Comenius thinks otherwise. Latin is too difficult, and is at the same time a poor language. A new tongue must be devised, at the same time easier and more complete than other languages. With this end in view, it is important to investigate the relation of sounds to objects and to harmony.

A new language can be formed in two ways, from the languages that exist or from things themselves. The latter is the method approved by Comenius.¹ This universal language is not to abolish others. Learned men may still use Latin, Greek, and Hebrew, and nations their vernaculars (chap. xix.). A golden age is then to set in, in which the conversion is to take place, first of the Mohammedans, then of the heathen, and finally of the Jews (chap. xxi.).

In the conception of a new language, on which he lays so much stress, he was not alone. Dalgarno, a Scotsman, published a sketch of a *Lingua Philosophica* in 1661, and

¹ Cujus singulæ voces loco definitionum essent, ad rerum ipsarum numeros, mensuras, et pondera factæ.

Bishop Wilkins, at the request of the Royal Society, brought out an elaborate scheme of a similar nature in 1668. Wilkins's scheme does not deal with the relations of sounds to things. "The first thing in such an institution," he says, "is to assign several letters and sounds for the forty genuses."¹ This is done arbitrarily, and on this substratum the language is built up. It was to be written in a kind of shorthand, the signs for which are rather clumsily chosen. The universal language must have been one of the topics of conversation between Wilkins and Comenius, and it is difficult to say which, if either, borrowed it from the other.

Parliament now sat again, but had too much work on its hands to devote any attention to Comenius, and told him to wait. In the meantime he was assured that the intention was to give over to him some college with its income for the carrying into effect of his schemes. In London the Savoy or Chelsea College, and in the country Winchester College, were suggested as suitable institutions, so that, as Comenius remarks, "nothing seemed more certain than that the scheme of the great Verulam, of opening in some part of the world a universal college, whose one object should be the advancement of the sciences, would be carried into effect."²

But trouble had broken out in Ireland, and in England it was evident that affairs were working up to civil war. Comenius soon perceived that amid so much turmoil there was little chance of these suggestions being carried into practice, and began to think of returning home.³ His position was unpleasant. On the strength of Hartlib's invitation and assurance that funds would be forthcoming, he had given up his post in Lissa. Hopes of universal colleges and pecuniary support were now vanishing into thin air, and he found himself with baffled expectations,

¹ 'An Essay towards a real character and a philosophical language,' by John Wilkins, D.D., Dean of Ripon and Fellow of the Royal Society. London, 1668. P. 414.

² *Op. Did. Omn.* ii. preface.

³ 'De novis studiis didactica continuandis occasionibus.'

a wife and daughters to support, and a rapidly emptying purse.

It was at this juncture that a new patron, Ludwig de Geer, appeared on the scene. De Geer belonged to an aristocratic Dutch family, and had realised an enormous fortune in commerce. The centre of his business transactions, which he left to his agent Hotton, was Amsterdam. He himself resided on his estates at Finspong and Norköping in Sweden. It was through Hotton that he first heard of Comenius, in whose projects he began to take a keen interest as soon as his attention was directed to them. A letter sent to Lissa through Hotton's agency arrived too late, and it was not till he had been in London for some time that Comenius received it. Feeling that Hartlib had perhaps promised more than he could bring about, he wrote to de Geer saying that if he had received his letter before leaving Lissa he would now be not in London but in Sweden.

This letter elicited another pressing invitation from de Geer, and to this Comenius sent an answer in December, explaining that he was not quite a free agent; his Church had the first claim on him, and he must consult his superiors before taking any fresh step.

Hartlib, who was aware of the correspondence with de Geer, now did his best to induce Comenius to stay in London, and brought out an English translation of the *Prodromus* under the title *A Reformation of Schooles*, in the hope of attracting renewed attention to the Pansophic schemes. But the unsettled state of affairs and his growing need of money made Comenius daily more anxious to get away. Fresh correspondence with de Geer followed, in which he pointed out that, if he was to make any real progress with his Pansophic books, he must have the assistance of some fellow-workers. Alone, he would find the task too great. De Geer, however, seems to have demurred to the proposal, and objected to Joachim Hubner, one of the proposed colleagues, on the ground of his religious opinions.

These negotiations occupied the spring of 1642, during which time Comenius employed himself by composing his *Pansophiae Diatyposis*, published two years later at Amsterdam.

He now, quite unexpectedly, received an invitation to go to France, but, having already made up his mind to visit Sweden, left London for Holland in June.

In August he reached Norköping and had his first interview with de Geer. On the subject of Pansophia the new patron preserved a discreet silence, but after several days' conversation an understanding appears to have been arrived at, and nothing remained but to fix on a suitable spot in which Comenius might settle down to his labours.

Partly with the object of getting suggestions on this point he went to Stockholm by de Geer's advice to see Oxenstierna, the Swedish Chancellor, and Skythe the Rector of the University at Upsala. The fact was that what de Geer wanted was not Pansophic works, but school-books for the Swedish schools, and in sending Comenius to call on Oxenstierna he was doubtless carrying out a preconcerted scheme.

Arrived at Stockholm, Comenius had to undergo a running fire of interrogation. Oxenstierna in particular plied him with the most searching questions, and his remarks seem to have made a deep impression on the worthy pedagogue, since, in one of the brief biographical notices that are scattered up and down his works, he devotes more space to this interview than to any other event in his life. For two days the Chancellor discussed the Didactic works. From his youth, he confessed, he had felt that the common methods of instruction were contrary to nature, but had been unable to say exactly what the defect was. At last, when on an embassy to Germany, some learned men with whom he discussed the subject told him that Wolfgang Ratke had devised a new method. He immediately put himself into communication with him; but Ratke absolutely refused to give him a personal interview, and sent him instead a ponderous quarto volume, the contents of which

did not come up to his expectation and appeared to be of less practical worth than the suggestions of Comenius. Comenius modestly replied that he had done what he could in this branch of reform and was now busy with his Pansophic schemes. To which Oxenstierna rejoined that he was aware of this, as he had read the *Prodromus*, and that he would discuss the subject on the following day.

The morrow's interview was far less pleasing to Comenius. The hard-headed Chancellor was not nearly so disposed to be enthusiastic over the Pansophia and the visionary schemes connected with it as were Hartlib and his circle. "Can you stand contradiction?" he asked. Comenius replied that the one object of publishing the *Prodromus* had been to obtain criticism of any kind, while that of a man like Oxenstierna would be doubly valuable. The Chancellor then began to bring forward objections to the whole scheme of regenerating the world by means of Pansophia. Some of these objections were political, others rested on the Scriptural assurance that darkness rather than light was to be man's lot on earth, but to all Comenius gave such satisfactory replies that he imparted some of his enthusiasm even to the sceptical critic, who exclaimed, "I do not believe that any one ever had ideas like yours. Continue to build on the foundations that you have laid." Wiser judgment then returned, and he strongly advised him to leave his Pansophic schemes alone for the moment, to devote himself to the improvement of schools, and to elaborate his improved method of teaching Latin, since thus he would pave the way for more ambitious efforts in the future.

To Comenius, who was heartily sick of what he calls his *spinosa didactica*, this advice must have been a bitter potion, but, as Skythe echoed Oxenstierna's opinion, and further suggested that Elbing in Prussia would be a suitable place for him to settle in with his family, he gulped it down with the best grace possible.

Comenius now returned to Norköping, and, on communicating the result of the interview to de Geer, found to

his disgust that his patron viewed Oxenstierna's advice with the highest approval. He had, therefore, no resource but to submit, and consoled himself with the hope that the task would take him only a couple of years, after which he might again devote himself to philosophy.¹

Preparations for the move, and a preliminary visit to Elbing, occupied the next few months. In Lissa he had to take final leave of his scholastic and clerical duties and engage some assistants to help him with the philological work in view.

At this return to philology his friends in England were indignant, and did their best to recall him to his former projects. "You have devoted sufficient attention to school-books," they wrote; "others can carry on the work you have begun. The world will gain far more advantage from having the paths of true wisdom opened to it than from any study of Latin." "Quo moriture ruis? minoraque viribus audes?" added Hartlib, more disappointed than any of them at the dissipation of their Pansophic dreams of the previous winter.

Comenius wavered. He still hankered after Pansophia, and sent Hartlib's letter to Sweden in the hope that it might cause de Geer and Oxenstierna to alter their views. But a stern reply, bidding him to persist in his undertaking and complete the school-books, was all that he obtained, and with great unwillingness he set to work.

In the history of great renunciations surely none is stranger than this. We have a man little past the prime of life, his brain teeming with magnificent if somewhat visionary plans for social reform, a mighty power in the community that shared his religious ideas, and an object of interest even to those who may have shrugged their shoulders at his occasional want of balance. Suddenly he flings his projects to the winds, consigns his darling plans to the dust-heap of unrealisable ideas, and retires to a small sea-side town—not to meditate, not to give definite form to latent conceptions or to evolve new ones, not to make

¹ "De novis studiis didacticae continuandis occasionibus."

preparations for the dazzling of intellectual Europe with an octavo of fantastic philanthropy or of philosophic mysticism, but—to write school-books for the little boys in Swedish schools. True, he was paid. He was bartering his inclinations against coin of the realm, against the good gold that streamed from de Geer's Dutch counting-house. He was going to do useful work. Europe gained far more advantage from his school-books than from the *Pansophia* that did but impart a certain dignity and finish to his didactic method. None the less, Comenius was martyrising himself. Money, sufficient for his daily wants, he could always obtain, and with ease. Of school-books he had written enough, and of school method he was sick unto death. It was the old story. The old inability, on the part of a versatile man, to realise his true vocation.

Musicians have hankered after brushes and palate, statesmen have grudged to public affairs the energy filched from literary pursuits, and Comenius, the inspired schoolmaster, wished to shut up his dictionaries and grammars and to philosophise about things in general. His *Pansophia* may have been useless ; to the progress of exact thought it may even have been harmful ; he may have been totally unfitted to attempt the welding together of a philosophic system ; but this it was, and nothing else, that he wished to do, and this it was that he determined to renounce.

The reason is not far to seek. It was his steadfast belief, backed up by the prophecies of Kotter and of Christina Poniatowska, that his co-religionists would one day triumph over their enemies and be restored to their native land, and the agent that was to bring this about was Sweden, the great Protestant power of Europe. By thus linking himself with Sweden, by carrying out the wishes of de Geer, Oxenstierna, and Skythe, he was establishing a powerful claim upon the generous treatment that he believed the Swedes destined to accord to his countrymen, and making straight the path along which his Church was to march home in triumph. This was why he held himself bound to accept de Geer's offer ; this was the ulterior

object, to attain which he thought no present sacrifice too great.

It was in the November of 1642 that he reached Elbing. In spite of his eagerness to get to work, the first week was one of enforced idleness, for he had to furnish the house that he had taken; but these material defects were soon remedied. The immediate task was to rewrite the *Janua Linguarum* and to compose the lexicon and grammar that were to accompany it. He was now to have assistance in his labours, and as fellow-workers had brought with him Paul Cyrillus, Peter Figulus, Daniel Petreus, and Daniel Nigrinus. Bechner, whom he had been anxious to secure as a collaborator, was unable to come. Still further to ensure getting through the work with speed, he gave out that he must drop all correspondence with his friends for one year, an intention, needless to remark, that he found impossible to carry out.

The Swedish patron was as good as his word, and as soon as he heard that Comenius was definitely settled at Elbing, and ready to set to work, remitted 1000 thaler for him and for the Brethren. With the letter of thanks that Comenius sent to Wolzogen, de Geer's agent at Finspong, he forwarded also some copies of the *Vestibulum*, and suggested that the Swedish boys should write it out from dictation while waiting for the revised versions on which he was engaged, such an exercise being an essential part of his method.

Elbing had seemed an eminently suitable place to work in, and Comenius had imagined that he would be free from any great interruption. Unfortunately Bartholomew Nigrin, formerly minister of the Reformed Church at Dantzig, had settled there, and his presence appears to have been a continual source of disturbance to Comenius. Nigrin had been imbued with the notion, shared, as we have seen, by John Durie, Hartlib, and many others, that a union of Christendom was possible. With the apparent object of furthering this end, he tried to induce Comenius to throw up his contract with de Geer and withdraw him-

self from all connection with Sweden. Comenius, who saw in Sweden the future protector of the Evangelic Faith, had made his engagement with open eyes, so that it is difficult to see why these overtures on the part of Nigrin should have caused him so much annoyance. At any rate, Nigrin soon went over to the Roman Catholic faith, and from that time gave Comenius little trouble.

Resolutions notwithstanding, philological works were very far from getting Comenius's undivided attention. His *Pansophiæ Diatyposis*¹ had been commenced in England, and, in his anxiety to get it into print and thus give his friends in England some earnest that his Pansophic activity was only dormant, he devoted a great part of his time to its completion. In the summer of 1643 we find him in Dantzig making arrangements for its publication, which followed shortly after.

He now made a vigorous effort to devote himself wholly to the revision of the *Janua*. Latin authors had to be gone through with minute care to ensure that no important word was being omitted, and, the more labour Comenius and his assistants bestowed on their task, the farther it seemed to be from completion. It was impossible to say how many months would pass before the end was reached, and more than once, while suffering from the irritation induced by his somewhat pettifogging occupation, he was on the point of throwing up his engagement and returning to his *Universal Knowledge*. But the Brethren had to be considered, and de Geer was helping them liberally. In June a fresh subsidy was sent, and Comenius, by way of showing some sign of life, sent letters to his patron, to Bishop Matthiae of Sweden,

¹ 'J. A. Comenii, *Pansophiæ Diatyposis Ichnographia et Orthographia delineatione Totius futuri Operis amplitudinem, dimensionem, usus adumbrans.*' This work was translated into English in 1651 by Jeremy Collier, Fellow of St. John's College, Cambridge (father of the non-juror), under the title 'A Patterne of Universall Knowledge in a plaine and true draught: or a diatyposis or model of the eminently learned and pious promoter of science in generall, Mr. J. A. Comenius, shadowing forth the largeness and use of the intended work in an ichnographical and orthographical delineation.'

and to Oxenstierna. To the latter he also forwarded a copy of his *Via Lucis*, in the hope of stimulating the slight interest in the Pansophia that the statesman had evinced in the previous year. In particular he asked him for a criticism of the didactic principles contained in chap. xvi. This letter shows what extravagant expectations he entertained of the part that Oxenstierna was to play in the support of Evangelism. "Since we live in hope," he wrote, "that the fall of Babylon will give an opportunity for the restoration of Zion, and since we see that the time is drawing near, I am of opinion that you ought not to remain in ignorance of our views on this matter, since you are one of those in whose hands the rod of judgment has been placed."

These expectations were increased by his old school-companion Drabik, of whom he had, for a long time, heard nothing. Drabik, who was living in Hungary, sent a copy of fourteen revelations that had been made him from heaven. These spoke of the brilliant future in store for the Evangelical Church, and in particular of the exaltation of Comenius, who was destined to make the good news known to all nations. Comenius had already had an unfortunate experience with the prophecies of Kotter and of Poniatowska, whose weak point was their unfulfilment. This time he was more wary, and replied that, before he accepted any prophecies as true, he must examine them, as well as the prophet, carefully. In the meantime he would pray God to give him light.

It now began to dawn on de Geer that the scholar whom he was paying to write class-books for Sweden was spending his time over matters philosophical and theological. In answer to a remonstrance from Wolzogen, who complained that time was passing and that nothing had been produced, Comenius answered that it was too soon to expect any result. He was writing books and not copying them; his work was on a totally new plan, and needed time and labour to make it harmonious in all its details. If the Swedish children had no school-books, let them employ themselves in learning their own language, Scripture history,

piety, and good manners. They would soon make up for lost time when the Latin text-books were completed. With this assurance de Geer had, for the moment, to be content.

But, in spite of his promise to get on with his philosophical works as quickly as possible, we find Comenius still busied with philosophic plans. Under the circumstances, it is not surprising to find that de Geer strongly objected to a Dr. Kozak of Bremen, whom Comenius suggested as a collaborator, since Kozak's interests were purely scientific. At the same time an effort was made to induce the Hamburg professors, Jung and Tasse, to join him in his Pan-sophic work, but they refused to leave their present positions unless a high salary could be guaranteed them, and for this Comenius knew that it would be useless to ask de Geer.

It is possible that, had he been able to arrange a meeting with his patron in the summer of 1644, he would have attempted to withdraw from an engagement that he found so irksome, but travel was rendered dangerous by the war that had broken out between Sweden and Denmark in the preceding year. The claims on his time remained as numerous as ever. In this year (1644) he published a religious work, *Absurditatum Echo*; and, at the request of the Elbing Town Council, undertook to lecture at the Gymnasium on the *Janua Rerum* four times weekly, from one till three o'clock. For this he was to receive a salary of 400 florins. As if he were not already sufficiently occupied, he found himself compelled by his position as an elder in the Moravian Church to attend an Evangelical meeting at Orla in Lithuania.

It may appear like dishonesty on Comenius's part that he so persistently dissipated his energies on other work while in de Geer's pay for a specific purpose, but to any such accusation two very strong rejoinders may be made.

In the first place, he was undoubtedly devoting to his school-books a very great deal if not quite the whole of his time; and, in the second, he had shown to what extent he considered himself bound to carry out his engagement, by refusing two offers of a far more congenial character.

In 1643, George Rakoczy, Count of Transylvania, had asked him to accept the professorship formerly held by Alsted, and at the same time to undertake a general reform of the school system in Hungary. Count Radziwill of Lithuania had gone further, and had actually proposed to give him a residence on his estate and endow him with the quarter of his income that he might carry on his Pansophic studies in peace. Both these suggestions Comenius had rejected, and he therefore felt that, while practically fulfilling his promise, he was not called upon to become an utter slave to de Geer's desire for school-books.

De Geer, however, did not see matters in the same light, and, on his return from Orla to Elbing, Comenius found himself compelled to write a dutiful letter to Hotton, each line of which shows that the chains that bound him to philology were galling his flesh. "O that it had pleased God," he writes, "to instil these thoughts into another, to implant these intellectual desires in another's mind! O that I might have either greater powers or fewer desires! But with every forward step that I make, a further insight is granted me, and I find it impossible not to strive after what is deeper and better. The consequence is that my former work always seems imperfect, and though I correct and improve in a thousand ways and without intermission, I arrive at no definite result. The task that I have undertaken is a great one, and my efforts are like a stream whose volume of water increases as it gets farther from its source. You see that I have something in my mind greater than a *Vestibulum*, a *Janua*, a *Dictionary*, or leading-strings for boys of that description."

But neither this letter nor one of a later date received any answer, and Comenius wrote again (November 1644) imploring de Geer, in God's name, not to desert him, since he had refused help from other quarters. In proof of this he copied several passages from Count Radziwill's letter and sent them to Hotton, that de Geer might see if he had really been guilty of inconstancy. He must at this time have been in serious pecuniary distress, only slightly

alleviated by the authorities at Elbing, who provided him with a house rent-free.

At last the long-expected letter from Sweden arrived. Hotton had made peace with de Geer, and the result was a remittance of 400 thaler. In his letter of acknowledgement, Comenius, with that simplicity which is his strongest characteristic, speaks out of his inner consciousness and assures his patron that what hinders him in his work is the novelty of his Pansophic system, and the effort to lay the foundations of truth without any sophistry.

It must indeed have been small comfort to de Geer, who was impatiently waiting for his school-books, to be told that their composer was engaged on a work destined to reform human affairs, and of which the *Pansophia* was only the seventh part.

In the following year (1645) Wladislaw IV. of Poland summoned a great religious conference at Thorn, and invited the various religious bodies to send representatives. The union of Catholics and Protestants had been one of Comenius's favourite notions, but, on hearing that Dantzig proposed to send to the Synod two Lutherans, who had little in common with the Moravian Brethren, he decided to have nothing to do with it. Though the Brethren at Lissa had been very anxious that he should represent them, they excused him at his earnest request. "May all these sects and their supporters perish," he wrote. "Christ, whom I serve, knows no sect." In order, however, that he might have some reason for absenting himself from such a representative gathering, he wrote to de Geer, asking him to send a summons to Sweden and thus free him from the pressure to which he was being subjected. But de Geer dissuaded him from coming to Sweden until the war between that country and Denmark was at an end.

Deprived, therefore, of this excuse, and continually urged by his friends to attend the conference, Comenius gave way, and set out for Thorn. On his arrival (August 1645) he received a friendly communication from Hotton, warning him that de Geer's patience was exhausted, that he

wished for completed works and not new plans, and that an angry letter from him was on its way.

This news made Comenius anxious, and, as the conference progressed but slowly and promised to be a long affair, he determined to return to Elbing. Just before leaving Thorn he received from de Geer the letter that had been heralded by Hotton. It was violent and full of accusations. He had better get those for whom he worked to support him. The three years at Elbing had been fruitless, since he had published nothing. Descending to particulars, de Geer complained that the salary of 400 thaler promised to a Dr. Cyprian Kinner was far too high.

At first, Comenius was completely overcome by this attitude on the part of his patron, but, by the time he returned to Elbing, he had recovered his self-possession, and wrote de Geer a calm justification of his conduct. He pointed out that his works, which, as a matter of fact, were nearly completed, formed a harmonious whole, so that one could not be published before the other, and that the distracting occupations which de Geer cast in his teeth were no more than was necessary to give his mind needful relaxation after its arduous labours. Coming to the incident of Kinner, he pointed out that a captain in the army received more pay than the salary that was considered too high, and that, if de Geer wanted the books finished at all, it was absolutely essential that he should supply competent assistance. If he wished, he might withdraw his support. "Were I not beset with applications on every side," he concludes, "and, in addition, threatened by approaching old age, I should desire nothing better than to retire into some solitude and there give myself up to my favourite investigations. I should seek no patron, but rather strive with all my might to stand in need of none."

Comenius's friends in Lissa now came to the rescue, not with funds, for money was a very scarce commodity among the Moravian Brethren, but with what was, from their point of view, the soundest advice under the circumstances.

“Finish your school-books as quickly as you can,” they said, “and then devote yourself to your clerical duties.” So Comenius set to work once more, and this time in earnest. There was still a good deal to be done. The *Janua* had to be completely rewritten, in accordance with a new principle of arrangement, and the composition of the grammar and lexicon demanded patience. He had hoped for assistance from Kinner, but for the moment Kinner was detained in Schleswig-Holstein, and, though we find him working with Comenius later on, he seems to have been partly engaged on a Didactic of his own.¹

De Geer was mollified by Comenius’s letter and by his evident intention to complete his task. At the beginning of 1646 he sent him 500 thaler for himself and the same sum for the Brethren. At the end of the year we find Comenius in Sweden, where a commission of three men examined the school-books, now almost completed, and reported favourably on them. It only remained to put the finishing touches.

But poverty and trouble pursued Comenius relentlessly. Any money that came into his hands soon found its way to the pockets of the needy scholars and exiles who clustered round him. At this time he was especially anxious to aid Ritschel, a former collaborator, now in great distress. Himself in need of assistance, he made urgent applications on Ritschel’s behalf to the Reformed Church in Belgium, and managed to collect the sum of 50 thaler. Importuning for charity, even though he himself was not its object, was greatly against the grain; “Better die than beg,” he wrote to Hartlib.

In former years Hartlib might have helped him, but he had already spent the greater part of his fortune in the promotion of experiments of various kinds, and, though

¹ A sketch of this ‘D. Cypriani Kinneri Cogitationum Didacticarum Diatyposis Summaria’ was translated by Hartlib, under the title: ‘A Continuation of J. A. Comenius’s School Endeavours, or a Summary Delineation of Dr. Cyprian Kinner . . . his Thoughts concerning Education, or the way and method of Teaching. London, 1648.’

Cromwell had awarded him a pension of £100 yearly, it is doubtful if he received it regularly. Certain it is that, after the Restoration, he was in great distress. He was now busily engaged with the project of a "Correspondence Agency," which he wished to see established in London. This was to be a kind of Information Office, where any one might seek advice (gratis, if he were poor) on any subject. In addition, it was to further correspondence and learned intercourse between men of talent within and without England, and by this means the realisation of Bacon's scientific and of Comenius's pedagogic schemes was to be rendered easier. The scheme, however, a somewhat visionary one, was not carried out, and remained one of the blind alleys into which so many enthusiasts in England were led before their efforts culminated in the actual formation of the Royal Society in 1660.

A considerable portion of the school-books was now actually ready, and was despatched to Sweden at the beginning of 1647. This included the *Methodus Linguarum Novissima*, with its index and dedication, and part of the *Janua*. More Comenius refused to send until definite arrangements for publication had been made. The *Janua* was to be illustrated, and this caused additional delay. Considering that Comenius was now engaged on his treatise, *Independentia confusionum origo*, a work directly aimed against the sectarian tendency of religious bodies in England, it is difficult to imagine how he found time to busy himself with business arrangements at all.

A fresh page in his life was now to be turned, and, had the bulk of de Geer's books not been completed, the chances are that they would have remained unfinished. The aged Bishop of the Unity, L. Justinus, had died at Ostrorog, and Comenius was elected to fill his place. His acquiescence in this choice meant that the connection with de Geer must to a large extent be broken, as pastoral duties would now take up much of his time. In spite, therefore, of his expectations from Sweden, he at length made up his mind to turn his back upon that country, and, leaving his

retreat at Elbing, once more took up his residence at Lissa. De Geer and Hartlib were both anxious that he should leave the books to be published by Elzevir in Amsterdam, but he thought it better to see them printed under his own eyes, and insisted on entrusting them to a local printer at Lissa. He was now settling for the second time in the town where his spurs as a schoolmaster and as an educationist had been won, and many things combined to make him enter on this new stage of his career with that melancholy to which the Slavonic temperament is ever prone. He was fifty-six years old. His life had been spent in exile and in the continual struggle against poverty. His hopes that the Evangelical religion would ultimately prosper must, by this time, have been a good deal shaken. The *Pansophia* was not completed, and, at his age, with his duties, and in a century when the duration of life was shorter than at the present day, he could scarcely hope to finish it. True, he had produced his school-books, his *Great Didactic*, and his *Treatise on language*, but these were to him nothing but *spinosa didactica*. His life-work, the work for which he had wished to be remembered, existed but in his own fancy and in the loose sheets of uncoördinated information that he had been collecting for years. In addition, the death of his wife, for whose weak state of health the journey to Lissa had proved too much, made him more than ever in need of the sympathy that, as a Bishop, he was expected to extend to others.

To leave the author for a moment, and return to his writings. The printer at Lissa proved unsatisfactory, and, in 1650, Comenius sent the manuscripts to Amsterdam, washed his hands of them, and left their publication to de Geer. The works written between 1642 and 1650 constitute the second part of the *Opera Didactica Omnia*. Here we find the *Methodus Linguarum Novissima*, a couple of pages of the *Vestibulum*, in Latin and in German, and the same amount of the *Janua*, both left unfinished because, as he tells us,¹ he brought out an improved edition later on, in

¹ *Op. Did. Omn.* ii. 297.

Hungary, and preferred to print this version in Part III. of the Folio. The grammar for the *Janua*, under the title *Januae Linguarum novissima clavis, Grammatica Latino-Vernacula*, he gives in full, because, though also revised in Hungary, the two works are practically distinct. The grammar written at Elbing proved too long for young boys (it occupies over 100 folio pages), and is more suited to the master than to the pupil,¹ while that written in Hungary is much shorter.

Following the grammar are some *Annotationes super Grammaticam novam Janualem*; additional information for teachers and hints as to the spirit in which the grammar should be used. "This is a grammar that I have given you," he says, in a few concluding words, "but one that is to serve as a prelude to logic, rhetoric, and the sciences themselves. Do we wish to train up boys so that they may always remain boys? Nay, it is to higher things that they must be advanced." The *Lexicon Januale* is not printed in the folio, since an edition of it was brought out by Thomas Gölz at Frankfort in 1656,² while the publication of the *Atrium* was hindered by Comenius's call to Hungary in 1650.

We thus see that the series of works composed for de Geer consisted of a philosophic treatise on Language, its nature, its functions, and the laws to be observed in teaching it, followed by a set of graduated reading-books and lexicons based on these laws. The *Methodus Novissima* deserves special notice, more indeed than can be given to it here. Its scope is not so wide as that of the *Great Didactic*, since it deals primarily with language, but in breadth of thought it is fully equal to it. Its great drawback is its bulk (it is half as long again as the *Great Didactic*). As a writer Comenius lacked the instinct of limitation, and in the *Methodus*, as in much that he wrote, allowed his pen to run away with him.

The work contains thirty chapters, and these fall naturally under seven heads.

I. cc. i.-iv. Theory of Language.—Philosophic dis-

¹ *Op. Did. Omn.* ii. 304.

² *Ibid.* 455.

cussion of the nature of language, the differences and resemblances that exist between various languages, and their respective defects and advantages.

II. cc. v.-viii. Historical.—Especial attention should be paid to one language in particular. Why this language should be Latin. The method of teaching it hitherto in vogue. Brief account of the efforts that have been made to improve upon that method.

III. cc. ix., x. Didactic.—A new method, based upon true didactic principles, is needed. Thorough exposition and analysis of these principles.

IV. cc. xi.-xiii. General description of the *Methodus Novissima*, with special reference to the principle of gradation involved.

V. cc. xiv.-xvii. This principle as applied to Latin. Description of the *Vestibulum*, *Janua*, *Atrium*, and *Thesaurus*.

VI. cc. xviii.-xxviii. Universal application of the method, not only to the teaching of Latin, but to the vernaculars as well; to polygloty, to scientific ends, to the better understanding of the Scriptures, to the improvement of schools, and to the education of rude peoples.

VII. cc. xxix., xxx. Appeal to learned men, theologians, and rulers, to further the principles involved.

With a large portion of the detail in this work the reader has already been made familiar, and about one-sixth (chap. x.) is an abstract of the Great Didactic; but scattered through the earlier chapters there are a number of suggestive remarks that illustrate the author's versatility and breadth of mind, and these we will briefly indicate.

It must be confessed that some of Comenius's philosophising on the nature of language is sorry stuff. The remark that language is derived from thought and thought from objects (*rebus*), has a plausible air, but is not developed. Of far greater interest is his description of a perfect language. For this, four things are necessary: (1) a complete nomenclature of objects, (2) no ambiguity in the meaning of words, (3) explicit laws for the proper construction of sentences, (4) the nomenclature

should not be redundant, each object being represented by one word and no more.

While such a conception of language is of logical value, it is evident that it could only seriously recommend itself to one who lacked all appreciation of literary style. Objects are limited, but the ways in which they may be viewed are infinite, and it is the possession of several words of varying etymological significance to express different aspects of the same conception that lends a language its charm.

In the domain of comparative philology we find Leibnitz to a large extent anticipated. The similarities between the chief languages of Europe prove beyond a doubt that they have a common origin, and this can be none other than Hebrew. In proof of this assertion he purposed, so he tells us, to write a comparative lexicon of the five chief languages of Europe. It is scarcely necessary to say that the choice of Hebrew as a root-language is suggested by religious associations and by the Scriptural account of the manner in which diversity of language originated. The difficulty of intercourse between nation and nation, for which the Tower of Babel is answerable, can be overcome by the adoption of some one language as a medium of communication. Here Comenius forgets his former decision in favour of a philosophical language, and casts his vote for Latin. After giving at length the arguments of Vives, he adds a few of his own. Latin is easy to pronounce, and in this respect possesses an advantage over most modern tongues. It is free from the difficulties of the Hebrew *ham* and of the Arabic *hha*. It has no *th* like English, no nasal vowels like Polish, and its consonants are not sometimes hard and sometimes soft, as in the Slavonic languages. Hungarian words are monstrously long, Chinese and, to a large extent, German words are too short, and have to be joined agglutinatively; but Latin vocables are of a medium and practicable length.

This prominence given to Latin as a link between nation and nation is not to discourage the cultivation of modern languages. On the contrary, it is of great importance

that each people should learn its own language thoroughly, and try to preserve it pure and free from admixture with others. A thorough knowledge of any tongue can be obtained by means of translations of the *Vestibulum*, the *Janua*, and the *Atrium*, and the desire to introduce foreign words will be diminished as the resources of the vernacular become better known. In this respect some nations are great offenders, and particularly the Bohemians, who continually borrow foreign words and expressions although their own language is an exceptionally rich one. The best method of maintaining the purity of a language is the inception of Academies, such as the Society della Crusca at Florence, or the Fruchtbringende Gesellschaft at Weimar. Some such society should exist in every country, and its first object should be to analyse the syntax and grammar of the vernacular, and to reduce them to definite rules. The conditions of those nations who are not sufficiently civilised to do this for themselves, exercises Comenius greatly. The task obviously falls to the lot of the neighbouring people. Thus, the language of the Laps must be set in order by the Swedes, Welsh by the English, and the American dialects by the Spaniards, Belgians, and English that live in America.

Such are a few of the interesting points, buried as usual beneath a mass of verbosity and repetition, that are raised in the *Novissima Methodus*. A short quotation from the fragment of the *Vestibulum* that immediately follows it in the folio edition of 1657 will show how closely the German was fitted to the Latin—

Invitatio.

Veni puer
aut quisquis es
qui cupis discere
Latinam linguam :
quae pulchra est
communisque populis
et facit doctos

Einladung.

Kom [her du] Knab
oder wer du seyst
der du begehrst zu lernen
die Lateinische Sprach :
welche schön ist
und gemein den Völkern
und macht gelehrte [Leut]

It was only in the introduction to the *Vestibulum* that the material was worked up into sentences. Comenius's didactic principles had led him to think that it was a mistake to begin with sentences, no matter how simple. The body of the work, therefore, consisted of lists of words, arranged under the various headings of the *Vestibulum*, and these the child had to learn, preparatory to employing them later on. The *Janua* did not undergo so much alteration. In its new form the plan of not repeating individual words was abandoned ; it was not written, as was the first edition, with special reference to the Bohemian language, and some fresh chapters, embodying an account of the world's chief religions, were added.

The grammar composed for the *Janua* does Comenius little credit. It is far too long (it occupies sixty-three folio pages), it abounds in divisions, subdivisions, and such-like complications, and is thus totally at variance with the rules laid down in the *Great Didactic*. It is followed by some notes for the teachers who used it.

In the midst of his varied activity Comenius had ever kept his eyes fixed on one beacon light, and this was the triumphant return of the Bohemian Protestants to their fatherland. To this end he had devised plans for school-organisation, church discipline, social reform, and what not. For this he had courted Sweden and waited in Oxenstierna's antechamber ; for this he had buried himself at Elbing, and had spent the best part of six years in doing what he detested, writing school-books ; for this he had pocketed his pride and eaten another's bread ; for this he had borne de Geer's petulant humours and inconsiderate arrogance. And now it all proved to be in vain. The Thirty Years' War was at an end. In 1648 the Peace of Westphalia had been ratified at Münster and at Osnabrück, and, while religious toleration had been granted to the Protestants in general, it had not been extended to the Bohemian Brethren. These found themselves as far as ever from the return to their beloved country.

To the whole Unity the blow was tremendous, but to none more than to its bishop. The revulsion of feeling caused by the overthrow of all his hopes was sufficient to strain the mental equilibrium of a man more evenly balanced than Comenius, and it is from this juncture that he commenced to give way to those prophetic tendencies that made him the butt of every academic scoffer in Europe, and contributed more than anything else to neutralise the influence that his life should have had on the immediate future of school-organisation.

Hard work, the most easeful of anodynes, came to his rescue. The bond by which the Brethren had been kept together was loosened, and the Unity was fast dispersing. Comenius's energies were divided between resisting this tendency and finding places as teachers for those who were leaving Lissa to seek their fortunes elsewhere. The Gymnasium had greatly declined since the days of his Rectorship, and the effort to bring it up to its former pitch of excellence laid an additional burden upon him. It was in literature, however, that he found the most complete refuge from the dull disappointments of life. His solicitude for the purity of modern languages was not confined to the general propositions laid down in the *Methodus Novissima*. In this year (1649) a German Dictionary from his pen was published,¹ followed by a translation of the eighth book of Lasici's *History of the Bohemian Brethren*; a last effort to keep the Unity together and excite the sympathy of Europe in its behalf. In cheerfulness his family history contrasted favourably with his political outlook. He had married again, now for the third time, and in the same year two of his daughters, Dorothea and Elizabeth, were married, the first to his literary collaborator Figulus, and the second to a young Hungarian, Molitor by name. It is to be regretted that we get no glimpse into the interior of the household, as, in the absence of definite information, it is difficult to imagine anything but a some-

¹ 'Index plenus Germanicarum vocum,' *Op. Did. Omn.* ii. 457.

what dreary environment of depressed theologians and needy compilers of school-books.

In the following year (1650) he addressed to his flock a curious document entitled *The Will of the Dying Mother*. The “dying mother,” needless to say, is the Bohemian Church, who exhorts her children and divides among them her spiritual treasures. The title alone speaks of a morbidly sensitive state on the part of the author, and it was well that his activity was soon to find an outlet into a channel healthier than any provided by the somewhat moribund Lissa.

Attracted by the *Methodus Novissima*, which was printed at Lissa at the same time as a work of his own, Christopher von Bnin, the Palatine of Posen, had already asked Comenius to assist him in founding a three-class Gymnasium at Sirakow.¹ This offer he was unable to accept, since he was already in communication with the son of George Rakoczy, his former well-wisher. Sigismund Rakoczy and his mother, the Countess Susanna, had read the *Pansophia*, some of which appears to have been published by this time,² and invited its author to come to Hungary and open a school on the lines laid down in it. Several circumstances made Comenius anxious to go to Hungary. There he would find a large portion of the Moravian Church, and there lived Nicolas Drabik, in whose revelations of the future he took more interest daily. He accordingly set out for Saros-Patak, where he arrived in May (1650). A short journey to Tokai with his patrons, during which he discussed the matter, gave him time to make up his mind, and he accepted the offer on the following conditions. Count Rakoczy was to provide a well-built school-house with seven class-rooms, adjoining which there was to be boarding accommodation for as many pupils as possible. There were to be some scholarships by means of which poor students, of whom a certain number were to be Bohemians, might receive board and education for a nominal fee; a sufficient number of masters to allow one for each class;

¹ *Op. Did. Omn.* ii. 458.

² *Visa enim illis et lecta, eatenus edita.*—*Ibid.* iii. 3.

and lastly, but probably, in Comenius's eyes, the most important of all, a printing-press, well supplied with type, and some printers to work it.¹

To these conditions the Count agreed, and Comenius then proceeded to draw up and submit to him a detailed scheme for the school, which he published in the following year under the title *Sketch of the Pansophic School*.² This sketch, of which we give a full description elsewhere, proves Comenius to have been a master of organisation. In scope and breadth of view, the scheme was centuries in advance of its time, while many of the suggestions that it contains are but imperfectly carried into effect at the present day.

Leaving his wife, his son Daniel, and his daughter Susanna at Lissa,³ Comenius, accompanied by his son-in-law Figulus, settled definitely at Saros-Patak in October (1650), and set about his task without any delay. With the object of exciting the sympathy of the residents in the town, he commenced a course of lectures on Education. The first of these, *On the cultivation of the intellect*,⁴ was delivered in the lecture-room of the school on the 24th of November, and was followed, four days afterwards, by another on *Books as the chief instrument of culture*.⁵ But his ingrained tendency to theorise was as displeasing to his Hungarian friends as it had been to de Geer. "Your schemes," they said, "are too ambitious. While you lecture to us and talk about your seven-class Gymnasium, the education of our sons is neglected. Make a modest commencement and open a few classes at once."

Under this pressure, therefore, Comenius wrote a short sketch of a three-class Gymnasium,⁶ which he dedicated to Sigismund Rakoczy, and in accordance with this sketch the lowest or Vestibular class was opened on the 13th of

¹ *Op. Did. Omn.* iii. 5.

² 'Scholæ Pansophicæ Delineatio.'

³ Kvacsala, p. 329.

⁴ 'De cultura ingeniorum oratio,' *Op. Did. Omn.* iii. 72.

⁵ 'De primario Ingenia colendi instrumento, Libris,' *Ibid.* 106.

⁶ 'De Schola Latina, tribus classibus divisa,' *Ibid.* 114.

February (1651). On this occasion he delivered his *Panegyric of the true method*.¹ The second, or Janual class, followed on the 14th of March, and was inaugurated in turn by a lecture *On the advantage of an exact nomenclature of objects*.² The opening of the Atrial class, occasion for a lecture on *The elegant study of style*, had to be postponed until the January of 1652.

In spite of the enthusiasm with which he had been welcomed on his arrival at Saros-Patak, Comenius's path of reform was a thorny one. In asking for a seven-class Gymnasium, he had, like a practical man, probably asked for a good deal more than he expected to get, but he experienced great difficulty in obtaining that even the three classes opened should be arranged in accordance with his didactic principles. The teachers of the school, who had been vaguely anxious for an improved method that promised to make their work lighter, were mutinous when they understood the details of the scheme. The introduction of so much orderliness meant for them regular attendance and continuous application, and to this they objected strongly. Chosen from "the crowd of students," accustomed to attend the lectures of professors and to come into class only in their spare hours, and then with their minds full of other matters, it is small wonder that reform was more congenial to them in principle than in practice.³ "The task of a schoolmaster needs the whole man, since it consists in fashioning and refashioning the countenance, the hands, the minds, and the hearts of the little ones"; but how could this be expected from men who only intended to remain in the profession for one year,⁴ who looked on their occupation as degrading, and meant to leave it as soon as they could find any more lucrative employment?⁵ It need scarcely cause surprise

¹ 'Methodi veræ encomia,' *Op. Did. Omn.* iii. 739.

² 'De utilitate accurate Rerum nomenclaturæ Oratiuncula,' *Ibid.*

745.

³ 'Methodi veræ encomia,' preface, *Ibid.* 736.

⁴ Nemo ultra annum perduraturus.—*Ibid.*

⁵ 'Leges Præceptorum,' xvi. *Ibid.* 796.

that masters of this stamp were little in sympathy with the most striking features of the new method. "Of what use is a complete nomenclature of objects to us? we are not going to be philosophers," they said, when the *Janua* was placed in their hands. "Of what use is style to us? we are not going to be Ciceros,"¹ they remarked, when they saw the *Atrium*. With such unpromising material it needed a stronger man than Comenius to achieve success.

He was probably at a loss to know how to treat their opposition. The publication at this time of the *De Ratione Studii* of Joachim Fortius, and of the similarly named treatise of Erasmus, seems due to his desire to avoid odium by sheltering himself behind the authority of former writers. These treatises, however, produced no effect, so he followed them up by a pamphlet of his own, entitled *Fortius redivivus, sive de pellenda Scholis ignavia*, and, that he might enlist the sympathy of the boys on his side, began to sketch out the work that he called the *Vestibuli et Januæ Lucidarium* or the *Ocular demonstration of the nomenclature of Objects*, afterwards famous as the *Orbis Pictus* or *World in Pictures*, and to write his dramatic arrangement of the *Janua*, published later as the *Schola Ludus*.

But this brings us back to the text-books. Count Rakoczy had provided a printing-press and other requisites. Their publication was thus rendered a matter of comparative ease, and some of the masters in the school fitted a Hungarian version to the Latin text. They appear in Part III. of the Amsterdam folio, arranged in order of usage.

First comes the *Vestibulum*, remodelled as already described. This is followed by a very simple and practical child's grammar, occupying only thirteen folio columns, after which comes a complete index to the *Vestibulum*, referring each word to the number of the section in which it occurs. A few hints to the teacher express Comenius's views as to the method to be adopted. The boy is first

¹ 'De Studii Pansophici Impedimentis,' *Op. Did. Omn.* iii. 735.

to learn, in the vernacular, the names of all the objects mentioned ; an hour's instruction being arranged as follows. In the first quarter of an hour, the master reads over a portion of the *Vestibulum* to his class, and makes the boys read it aloud in turn. In the second, they copy out what he has read to them. In the third, the master explains the meaning of each word and examines the boys to see if they understand. In the fourth they learn the portion off by heart.

Two months should suffice for learning the whole of the *Vestibulum* in the vernacular, and then the Latin version may be placed in the pupils' hands. The same method as before may be adopted, and it is estimated that in four months the class should know their task thoroughly. The grammar may then be commenced, care being taken to translate each rule into the vernacular before the boys learn it. For this, three months are allotted, after which the pupils proceed to the lexicon or index. This should be read through in a fortnight, and with a fourfold object : (1) the boys will thus become accustomed to the abbreviations that they will find in the lexicon of the *Janua* ; (2) it will be an excellent opportunity for seeing how well they know the meaning of the words ; (3) by referring to the text from the words that they do not know, they will learn the numbers up to 500 ; (4) an examination in grammar can be instituted by asking them to parse each word as they come to it.¹

The pupil is now sufficiently advanced to leave the Vestibular and enter the Janual class. In the method that he suggests for this class, Comenius by no means rises to his own level, making the extraordinary proposal that the lexicon (100 folio pages) should be learned first, that then the grammar (twenty-five folio pages) should be mastered, and that then only should the text of the *Janua* be given to the boys.

Of course he had his reasons for this method, though

¹ 'De instituendis e Latinæ Linguæ Vestibulo exercitiis ad Præceptorem commonefactio,' *Op. Did. Omn.* iii. 206.

they are scarcely convincing. Under the old system, he says, when the beginner was introduced straight to the *Janua*, he had three difficulties to contend with, ignorance of the words, of their constructions, and of the objects to which many of them referred. These difficulties he hopes to overcome by adopting the order indicated. "First, rising from its roots, comes the forest of Latin words, the lexicon. Then we give you the tools for cutting this forest down, sawing the trees into planks, and fastening these together, namely, the grammar. Finally we place before you a short universal history of objects, fashioned out of all the words in Latin properly fitted together, namely, the text of the *Janua*."

This is a good example of Comenius's habit of running a fanciful illustration to death. It is quite true, as he points out, that in making any construction it is necessary to have, first the materials, and then the tools to work them into shape; but the result of his reasoning on these lines is grotesque. He places a ponderous dictionary in the child's hand, saying, "Learn this and I will let you read Latin." The older grammarians, with their seven genders and their multitudinous rules, never attained this pitch of absurdity.

The grammar, if not quite a model, from the modern standpoint, is yet extremely good. It is far shorter than that written in Elbing, and the rules are terse and to the point. It may interest the reader to see how Comenius introduces the prepositions that govern the ablative.

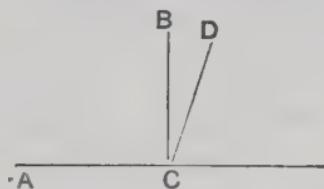
Præpositiones Ablativi.

Cum lupus nollet cedere de 1 via, nec ille fugere posset ab 2 eo, aut stare diu coram 3 eo, et sic fuit haud procul 4 morte, nisi pugnaret pro 5 vita: licet esset sine 6 socio (absque 7 socio) vibravit tamen hastam cum 8 impetu et transverberavit lupum, distractasque ex 9 illo exuvias ostentat, præ 10 gaudio, palam omnibus.

The edition of the *Janua*, that follows, is considerably

enlarged. It occupies fifty folio pages, and treats at some length of everything in heaven and earth, as the following extracts indicate:—

Sec. 518 (Geometria). Ex concursu linearum fit angulus qui est vel rectus, quem linea incidens perpendicularis efficit, ut est (in subjecto schemate) angulus ACB; vel acutus, minor recto, ut BCD; vel obtusus, major recto, ut ACD.



Sec. 578 (Chronologia cum Historia). Circa A. ch. 1300, coepit innotescere vis magnetis, qua se obvertit ad polos mundi; quod dedit ansam fabricandi Pyxidem nauticam, cuius ope detectum est alterum hemispherum orbis, totusque mundus navigationibus factus pervius; ut gentes (prius seclusæ et ignoratæ sibi invicem), jam possint colere communicationem utilitatum.

Sec. 717 (Theologia). Theologia tota fundatur super Revelationes Dei; quarum nihil ignorare, universalem sensum tenere catholice et posse vindicare qua inde torquentur hæretice, Theologica est exactio.

The pupil of the Janual class had thus the opportunity of acquiring a very fair knowledge of the world in which he lived. Armed with this, he proceeded to the study of the *Atrium*, and turned his attention to "style." Commencing with a *Grammatica Elegans*, which presupposes a knowledge of the rudiments of grammar and deals with subjects such as the transposition of sentences and prosody, he is then introduced to the *Atrium Latinitatis*. This is the *Janua* writ large (it covers eighty folio pages), and is composed with a view to illustrating the ornate capacities of the Latin language. The lexicon, written for use with it, was not printed in Hungary, and was first published by

Janson at Amsterdam in 1657. It was a Latin-Latin and not a Latin-Vernacular dictionary, as, by the time he reached the Atrial class, the pupil was supposed to possess a competent knowledge of the language. The Saros-Patak class-books, with the exception of the grammars for the *Vestibulum* and the *Janua*, were all inferior to the first editions previously published at Lissa. In his effort to be scientific Comenius fell into the very trap that he wished to avoid, and became complicated and tedious. But this relapse was more than compensated for by the celebrated *Orbis Pictus*, or *World in Pictures*.¹ It was impossible to publish this work at the printing-office of the Patak Gymnasium, as no engraver competent to execute the illustrations could be found, and it was therefore sent to Nuremberg, where it was brought out by Michael Endter in 1658. In the preface, Comenius states the philosophic principles by which he was guided in the composition of the work. "There is nothing in the intellect that has not first existed in the senses," says he, with an airy assumption of the materialistic standpoint that he rejects whenever he philosophises about things in general, but which yet plays such a living part in his pedagogy. "It is because schools commonly neglect this truth, and give the pupils things to learn that they do not understand and which have never been properly placed before their organs of sense-perception, that the tasks of the teacher and of the learner are so irksome, and that so little result is produced." When dealing with objects that are in the school-room it is easy enough to point them out to the beginner, but, when the range of the boys' vocabulary becomes more extended, the "object-lesson" process can be effected only by means of a picture-book. Such a book will serve several purposes. Small boys generally imagine that the operations of the school-room must necessarily be of a most dismal character. "Now it is well known that, from their

¹ 'Orbis sensualium pictus, hoc est Omnium fundamentalium in mundo rerum, et in vita actionum, Nomenclatura, ad ocularem demonstrationem deducta.'

earliest childhood, boys delight in pictures and feast their eyes upon them greedily. If we can thus free the gardens of wisdom from their terrors, our labour will have been well employed." In the second place, the book will excite the boy's interest and help him to fix his attention; and, thirdly, it will serve as a stepping-stone to the *Vestibulum* and the *Janua*, with which end in view it was primarily written.

Imagine the *Janua Linguarum* considerably shortened, simplified, and illustrated, and you have before you the *Orbis Pictus*. Each section has a picture corresponding to it, and numbers, affixed to individual words in the text, enable the boy to pick out in the picture the exact object to which the word refers. For example:—

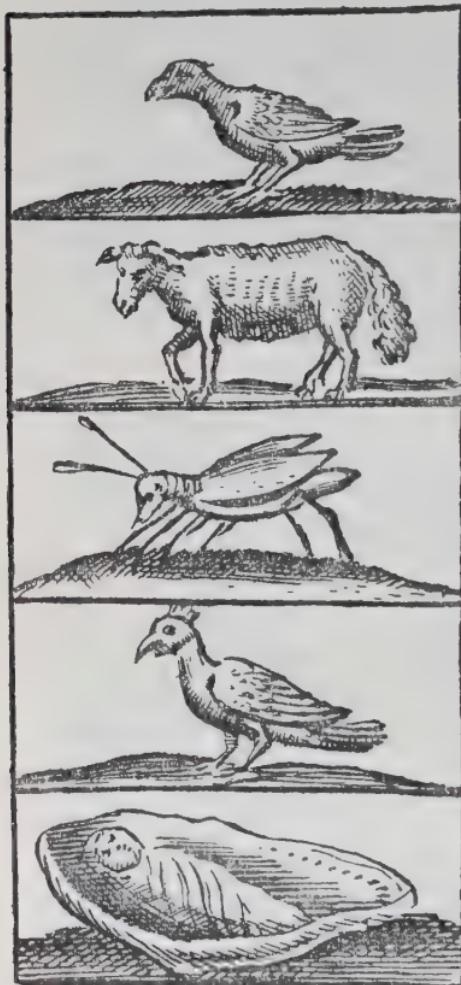
AĒR



Aura (1), spirat leniter; *Ventus* (2), flat valide; *Procella* (3), sternit arbores; *Turbos* (4), agit se in gyrum; *Ventus subterraneus* (5), excitat *Terra* motum; *Terra motus* facit *Labes* (et ruinas), 6.

Translated into the vernacular, it was to serve as a first reading-book. Even the letters and the manner of pronouncing them might be learned from a kind of picture

alphabet by which the text is preceded, and which suggests a connection between the sound of the letter and the cry of an animal.



Cornix cornicatur, *āāā* A a

Agnus balat, *bleble* B b

Cicada stridet, *cicic* C c

Upupa dicit, *du du* D d

Infans ejulat, *bleble* E e

The success of this book was even more extraordinary than that of the *Janua Linguarum*. It went through numberless editions, and was bought by thousands of parents who knew little of Comenius, and cared less

for his didactic principles. They found that children liked the pictures and picked up their alphabet, and a few words, easier in that way than in any other. That was sufficient for them, and they paid no attention to pedantic detractors who insisted that pictures should have been given only of those objects that could not be submitted to direct inspection. The *Orbis Pictus* was the first picture-book ever written for children, and exercised a softening influence on the harshness with which, in an unsympathetic age, the first steps in learning were always associated. For years it remained unequalled. Basedow's *Elementarwerk mit Kupfern* (1773) was the first attempt, not altogether successful, to improve upon it. "Apart from the *Orbis Pictus* of Amos Comenius," wrote Goethe, "no book of this kind found its way into our hands."¹

It is impossible to pass such a favourable criticism on the *Schola Ludus*, or dramatised form of the *Janua*. These plays were to be acted at the end of each term, and put the subject-matter of the *Janua* into the mouths of the *dramatis personæ*. These were generally about fifty in number, so that the greater part of the school could take part in the performances. The plays were intended to interest the pupils, but, if the boys of Saros-Patak in the seventeenth century were like those of the present day, they must have looked upon them as an unmitigated nuisance, and have objurgated the name of Comenius when they had to get up the dreary screed. In one of them, the mathematical section of the *Janua* is worked into a dialogue between *Mathematicus*, *Metrito*, and *Trytanio*.

Math. And so you are seized with a desire to learn mathematics?

Num. We are, sir. We seek for information, and promise you our gratitude.

Mathematicus then proceeds, in the most stilted manner, to expound the elements of mathematics, occasionally interrupted by expressions of wonder on the part of his pupils. Were it not wholly contrary to Comenius's character

¹ *Aus meinem Leben*, pt. I. bk. i.

to jest with a subject so sacred as education, we might almost suspect that the following was intended to be humorous :—

“This demonstration,” says Mathematicus, referring to Archimedes’s calculation dealing with the sand on the sea-shore, “is very accurate. But I am unwilling to waste time.”

“Marvellous, marvellous!” breaks in Numeriano, evidently afraid that Mathematicus may think better of it, and enter on a long discourse. “*Let us proceed to addition.*”

The plays occupy 100 folio pages, and are dismal stuff. If the audiences were as delighted with them as Comenius assures us they were, they must have been easily satisfied.¹

Of more interest are the hints as to their production, by which they are preceded.

Great care is to be taken that all the boys are present at the performances (attendentibus decurionibus ne quis absit). The actors are to be praised, if they acquit themselves successfully, and any of the poorer students who are among them may be presented with a prize of books. Finally, he adds, evidently mindful of reluctance on the part of all concerned, it will be a great stimulus if the actors and their masters are invited to supper after the play.

Of the Patak publications it only remains to mention the little tract *On Manners*,² and the *Laws of a well-ordered School*.³

These are both so full of interest that we greatly regret that lack of space prevents our giving them in full. Comenius, in this respect in accord with William of Wykeham, was evidently a great stickler for good manners. “He who excels in learning, but lacks manners, is deficient rather than proficient,” he writes at the head of his precepts. These treat of dress, of how to stand and how to walk, of speech, of manners toward the master and toward school-fellows, of behaviour in school, in church, at table, and in the playground. The following are some of the rules for behaviour at meals.

¹ Peractis cum applausu hisce Ludis.—*Op. Did. Omn.* iii. 1042.

² ‘Præcepta morum, in usum juventutis collecta.’

³ ‘Leges scholæ bene ordinatae.’

It is ill-mannered for boys:—

- To lean their elbows on the table,
- Or to hold their hands beneath the table.
- To place morsels of excessive size in their mouths
- To gnaw bones with their teeth,
- Or to hand on to others food that they have half-eaten.
- To take food out of their mouths.
- To scratch their heads, or chatter and laugh while eating.
- To drink with their mouths full, or to make a noise while drinking.
- To pick their teeth with their nails or with their forks.
- At table a boy should not speak until first spoken to.

In the playground, boys are urged to run, to jump, and to play games with balls, since it is necessary to put the body in motion and allow the mind to rest. Forbidden pastimes are games played with dice, wrestling, boxing, and swimming, since these are either useless or dangerous.

On getting up in the morning, a boy is first to say his prayers, then to comb his hair, wash his hands and face, and dress neatly. He must remember to wish good morning to all whom he may meet. At night, he is to go straight to bed after evening prayers, and should not forget his private devotions. Once in bed, he should take care not to lie on his back, but must sleep half the night lying on his right and the other half lying on his left side. If several boys are sleeping in one room, there must be no talking after a given hour, and in any case all conversation out of school must be carried on in Latin.¹

The *Laws of a well-ordered School* repeat many of what we may call the commonplaces of the Comenian method, but also contain much that is new and to the point. Each class must have a separate class-room, and this should contain a raised desk for the master and a sufficient number of seats for the boys, so arranged that the

¹ *Op. Did. Omn.* iii. 776-784.

master can see all his pupils at once. The boys should sit with their backs to the window,¹ that the light may fall on the master as he works at the blackboard. In addition to the class-rooms there must also be a big school for dramatic performances and speech-days. Once a month the headmaster, accompanied by the clergyman of the parish or by one of the school-managers, should examine the class to see if fitting progress has been made. At the end of the year an examination on a larger scale is to be held, but, as it is impossible to examine the whole class, boys should be selected haphazard and questioned on their year's work. Promotions must be arranged in accordance with this examination.

Flogging is allowed, but with certain restrictions. On the first hour of Sunday, the whole school shall be called together, and, after the headmaster has read the rules, each master shall chastise those of his own pupils who have broken any of them during the previous week.

Comenius had evidently been a sufferer at the hands of that scourge of schoolmasters, the unreasoning parent. Before any boy is admitted to the school, his father must sign a document by which he undertakes to abide by the rules of the institution, and promises that his son's attendance shall be as regular as possible.

In the boarding-house, no meals are allowed out of hours, and such a thing as a tuck-shop is evidently not to be tolerated for a moment. Boys go to bed at eight o'clock and get up at four, and must make their own beds as soon as they rise.

The masters are reminded that their position is one of dignity and of great importance. For the headmaster, in particular, special duties are laid down. He should be a model to the whole school of virtue, piety, and diligence. As he has no class of his own he ought to go through all the classes daily, "as the sun courses through the heavens." He is to look after the school archives, and

¹ A regulation that would scarcely meet with the approval of His Majesty's Inspectors of Schools.

to keep an exact record of each boy's entrance to and departure from the school. He is to be hospitable, and should give testimonials of good conduct to deserving boys who leave the school. If other schools or cities send to him for masters, he may send them some of his best pupils.¹

It may seem surprising that Comenius remained for any length of time in Hungary. With his colleagues he was not a *persona grata*. His patron, Sigismund Rakoczy, died in 1652, and there was no prospect that the Gymnasium would be increased beyond the three classes already in existence. The Protestants in Lissa were continually urging him to return to them, and enemies whispered that his only object in staying at Saros-Patak was to line his own purse.

The Countess Susanna herself, a lady of a thrifty disposition and not particularly enthusiastic about Comenius, was the best refutation of this latter charge, and any disinclination to return to Poland must probably be ascribed to the influence of his evil genius Drabik.

Drabik, though living at Lednic, was in constant correspondence with Comenius and paid several visits to Saros-Patak, with the object of inducing the Rakoczy family to take some interest in his prophecies. In this he was not very successful, although Comenius did his best to impress on George Rakoczy that the revelations deserved careful attention, if not credence.

Were it not that Sludge is still with us and that scientific men of our own day still fall victims to the spirit-rapper, it would be difficult to understand how a man of Comenius's practical gifts, and not Comenius only but a host of Protestants throughout Europe, could for one minute have given any credence to this wretched impostor. Kotter may possibly have believed in his own revelations; Christina Poniatowska was a weak-minded and weak-bodied girl, subject to genuine fits of hysteria; but Drabik was a cunning calculator, who took stock of the material with which he had to deal and saw that, in

¹ *Op. Did. Omn.* iii. 784.

their present state of despair combined with superstitious expectation, the struggling Protestant communities would swallow almost any prophetic farrago that he chose to deliver to them. Count Rakoczy was to overthrow the house of Hapsburg, and Comenius was to anoint him king at Pressburg. In combination with Sweden, the Count was then to make Protestantism the faith of Europe. In this operation the Turks, of all people in the world, were to assist him, and, by the translation of the Bible into Turkish, for which the Countess Susanna was to supply the funds, were to be made cognisant of the exact grounds of dispute between the Reformed and the Catholic Church.

The transparency of Drabik's motives was only equalled by his brazen-facedness. In ignorance of the events that were taking place in the Rakoczy family, he continued to receive and to impart revelations concerning the future actions of Sigismund Rakoczy for months after his death. The shout of laughter that the scoffers raised at this unfortunate mistake would have been sufficient to induce most prophets to retire from business, but Drabik, with the greatest calmness, created George Rakoczy his brother's prophetic heir, and had the impudence to announce repeatedly that in a few weeks—so he was informed from heaven—he would be summoned to Saros-Patak, and taken on by the Rakoczys as a kind of family seer; a hint that produced no effect of the kind intended.

Comenius was as yet indisposed to give these revelations full credence, but he thought them well worth considering, and, as events of a peculiarly startling character were foretold for the year 1653, he remained in Hungary, thinking that it might be as well to encounter a social upheaval under the protection of the powerful Rakoczy family. Needless to say, nothing remarkable occurred at the prescribed date, and, as the Church in Lissa needed his presence urgently, he finally (1654) made up his mind to leave Saros-Patak. The non-fulfilment of the prophecies had, strange to say, not diminished his interest in Drabik, whose hold upon him grew firmer daily.

On the 2nd of June he delivered a farewell oration in the great hall of the Gymnasium. All the circumstances that had led to friction between himself and his colleagues were forgotten, and, in an eloquent speech, he wished prosperity to the school, and reminded its governors and patrons of the golden rules by which it might be attained.¹ Shortly afterwards he left Saros-Patak.

He did not, however, go straight back to Lissa, but stayed for a few weeks at Lednic, where he was in daily communication with Drabik. During the last few months of his residence in Hungary he had redoubled his efforts to induce George Rakoczy to take an interest in the *Revelations*, and had actually been invited to go to Siebenbürgen and expound them in person. This he had been unable to do, but, with the object of retaining the Count's interest, he wrote the tractate *Gentis felicitas*, in which, after discussing the general essentials of good and successful government, he treats of Hungary in particular, and urges the Count, as the perfect ruler and saviour of the Hungarian nation, to place himself in opposition to the house of Hapsburg and uphold the cause of Evangelism.

Under the fire of so much exhortation, George Rakoczy was unable to make up his mind. From a letter to Count Jonas Mednyanszky it appears that he did not attach very much importance to the prophecies, though, for other reasons, he was decidedly disposed to take the line suggested by them. To Comenius he wrote that his difficulties were immense, as he had to cope with the Emperor, the king of Poland, the Turks, and the fickleness of his own subjects. If, however, another defender of Evangelism were to arise, he would be quite willing to assist him.

The occasion was not far to seek. The succession of Charles Gustavus to the throne of Sweden introduced a new element into the political situation, and may have induced Rakoczy to think that Drabik's forecast of striking events in the near future was, after all, a divine communication. That he was greatly tempted to abandon the cautious pro-

¹ 'Oratio valedictoria,' *Op. Did. Omn.* iii. 1041.

cedure of diplomacy, and show his hand with the careless indifference of a passionate enthusiast, seems beyond a doubt. In sending an ambassador to the young king he was acting in conjunction with and under the direct influence of Comenius. Constantine Schaum, to whom the task of conducting the negotiations with Charles and with Oxenstierna was entrusted, had orders to go to Lissa on his way to Sweden, and the Count begged Comenius to give his envoy what advice he could.

For the Protestant exiles in Lissa the position was now greatly altered. Though Count Bohuslaw, on embracing the Catholic faith, had not withdrawn his protection from Comenius and the Brethren under his spiritual charge, it was evident that, in case of war, their situation would be precarious. The undisguised sympathy that they displayed for Sweden did not mend matters, and when Charles Gustavus, in the August of 1657, actually crossed the Polish frontier and marched as a victor on Warsaw and Cracow, danger stared them daily in the face. It was distinctly the moment when Comenius should have preserved a discreet silence, and have suffered himself and his compatriots to remain screened by their political insignificance ; instead of this, with his habitual simplicity, he published a *Panegyric on Charles Gustavus*, in which he hailed him as “the liberator of humanity, the comfort of the afflicted, and the pattern for kings.” The work, which had a considerable vogue, cannot have failed to embitter the feelings of the Poles against the aliens in their midst, and, as Comenius’s enemies afterwards declared, may have been partly responsible for the calamities that befell Lissa.

During his victorious march through Poland, Charles had spared a town that contained so many non-Catholics, and merely left a Swedish garrison to maintain the footing that he had acquired in the district. On the 17th of April, a large body of Polish troops came down unexpectedly, compelling the garrison to withdraw and leave Lissa at the mercy of the infuriated Poles. A large number of Protestants sought safety by fleeing into the forests on the

Silesian frontier, but Comenius and some of his friends scorned this course, and, with confidence inspired by Drabik's prophecies, calmly awaited the development of events. They were not left long in suspense. On the 29th of April, the Poles burst once more into the defenceless town, sacked it, and reduced it to ashes. It was with the greatest difficulty that any of the Protestants who had remained there saved their lives. Comenius succeeded in escaping to Silesia, where he took refuge with a wealthy nobleman, the Freiherr of Budova. He was once more homeless, and his worldly assets consisted of the clothes in which he stood, a few good friends, and a reputation somewhat damaged by the fanatical views to which he had committed himself.

Some days afterwards, his host sent Comenius's amanuensis over to Lissa with an escort to see if anything had escaped the conflagration; nothing could be found, however, but a few pages of the *Pansophia* that he had buried before his flight. Amongst other things he had lost his library, and promissory notes to the value of 1000 thaler; though these he valued but little in comparison with his precious manuscripts, into which he had put the best part of his energy, and with which his fondest hopes were bound up. His *Sylva Pansophiae*, containing "the definitions of all things"; his *Dictionary of the Bohemian Language*, on which he had been engaged for thirty years; his *Harmony of the Evangelists*; his refutations of Descartes and of the Copernican theory, and his collected sermons of forty years, all had been devoured by the flames,¹ and he filled the air with his lamentations. "Had God only spared me the *Sylva Pansophiae*," he cried, "all else would have been easier to bear, but even this is destroyed."² Was ever such irony? With the exception of the Bohemian dictionary, the works that were lost could have elicited little but contempt from subsequent generations. Those, on which his fame to a large extent rests, were already in the hands of half the

¹ *Op. Did. Omn.* iv. 5.

² Letter to Harsdörfer, Zoubek, p. 90.

schoolboys in Europe, and beyond the reach of any casual conflagration.

A letter of Pell's,¹ dated July 17th, shows that Comenius's friends in England were kept well informed as to the state of his affairs. "Five days ago," writes Pell, "I received a letter dated Dantzig, June 17th, containing a letter from Mr. Comenius, dated 22nd of May, wherein he describes the sad estate of those Protestants that escaped from Lesna, where he, for his own part, besides his writings, lost in money, books, and household stuff, above 3000 reichs-dalers (about £700 sterling). He had with incredible labour and no small journeys gotten the favour of some liberal persons, and hoped perhaps to leave his children £200 apiece, which among so many poor exiles would have seemed great riches. I hear he is sixty-five years old, and, it seems, hath nothing left but the clothes on his back. Those papers which have been found in the ashes and rubbish of Lesna are little worth in comparison of those which he accounts irrevocably lost. . . . I should have been willing to read over his refutations of the Copernicans and Cartesians, but with that prejudice that I do not believe him to be a competent judge of all the differences between them and other writers. And therefore of all his papers, there is none for whose loss I am less sorry, though he say of them, 'Me valde dolet, siquidem in iis multum posueram operæ et diligentiaæ.'

"I have caused his letter to be fairly written out and have sent it to the divines (pastors and professors) of Zurich, who esteem him and have introduced his *Janua* into their higher school some years ago. I make no question but they will do something for him."²

The terrible calamity that had befallen the Protestant community at Lissa excited the sympathy of non-Catholics throughout Europe. On every side collections were made

¹ Probably to Hartlib.

² *The Protectorate of Oliver Cromwell*, by Robert Vaughan, D.D., London, 1839. Vol. ii. p. 431. From Lansdowne Coll. of MS. in Brit. Mus.

in aid of the homeless exiles. From Dantzig as much as 3000 thaler was contributed to the fund, and in England it was even suggested that a grant of land should be made to them in Ireland. For Comenius, Silesia was but a temporary refuge, and on leaving it his first movements were unfortunate. His effort to settle at Frankfort on the Oder was frustrated by an outbreak of the plague, and in Hamburg, his next resting-place, the old man, worn out by the fatigues to which he had been subjected, underwent a severe illness.

As regards money he had no cause for anxiety. Laurence de Geer, the son of his former patron, came to the rescue and insisted that he should settle permanently in Amsterdam, under his immediate protection. Laurence had long been a passionate admirer of Comenius, though more from the religious and philosophical than from the educational standpoint. The hard-headed old merchant, his father, had refused to listen to Pansophic schemes and prophetic rhapsodies, and had sternly insisted that school-books and nothing else were what he wanted for his money; but the younger de Geer would place no such restriction upon his friend. Comenius might still dabble in education, if he wished; but he was to be left free to rewrite the Pansophic works that had been destroyed by the flames, and thus to complete what he regarded as the great work of his life.

As soon as he was well enough to travel, he set out with his family to Amsterdam, and here he found himself in the midst of friends. "Mr. Drury has returned to Amsterdam," writes Hartlib to Pell, "and promises with all speed to hasten unto us, and it is very like Mr. Comenius will come along with him."¹ But the invitation to England was not accepted. Comenius's time was fully occupied in getting together a library to replace that lost at Lissa, and in arranging for the publication of his collected works on education and of the prophecies of Kotter, Poniatowska, and Drabik. At the printer's

¹ Lansdowne Coll. of MS. Quoted by Vaughan, ii. 423.

de Geer seems to have given him unlimited credit. Indeed, his literary renown was so great, that a profit was actually expected from the sale of the *Didactic Works*, and with this his patron offered to finance a new translation of the Bible into Polish.

It is impossible to say if the magnificent folio, in which the *Didactic Works* appeared, sold as well as was anticipated. The edition must have been a small one, as the book was very rare a few years after Comenius's death. To the modern student it is invaluable on account of the numerous autobiographical notices of the author that it contains; but there is no doubt that it can have done little to further Comenius's renown as a theoretic educationist. The school-books, that appear in chronological order, were already well known, and their collected mass is so great that it quite swamps the *Great Didactic*. Had this work been published separately it could scarcely have failed to go through several editions, and might have been the means of rescuing the Comenian method from the oblivion into which it afterwards fell.

In itself the volume is a fine one, over 1000 folio pages in length, well printed and well bound. Under the title *The Complete Didactic Works of J. A. Comenius*,¹ it comprises works written, in Part I., between 1627 and 1642; in Part II., between 1642 and 1650; in Part III., between 1650 and 1654; in Part IV., between 1654 and 1657.

With the contents of the first three parts the reader is already acquainted. Part IV., which is comparatively short, consists of works written in Amsterdam. A collection of sentences based on the *Vestibulum*, arranged in alphabetical order and entitled *Vestibuli Auctarium*, is the only section of it that forms an essential part of the Comenian series of school-books. It is dedicated to a Dr. Rulice of Amsterdam, with whom Comenius was in daily

¹ 'J. A. Comenii Opera Didactica Omnia, variis hucusque occasionibus scripta, diversisque locis edita; nunc autem non tantum in unum, ut simul sunt, collecta, sed et ultimo conatu in Systema unum mechanice constructum, redacta. Amsterdami. Impensis D. Laurentii de Geer, Excuderunt Christophorus Cunradus et Gabriel a Roy. Anno 1657.'

intercourse. Of greater interest is the work that follows, *An Apology for the Latinity of the Janua*. On his arrival in Amsterdam, Comenius had been asked by some influential citizens to open a small school, and try the efficacy of his method on the Dutch boys. This suggestion seems to have made the established schoolmasters of the town apprehensive that the stranger, with his new methods, would make a bid for their teaching connection, and thus render their position insecure. They therefore brought against him the only charge that would hold water, namely, that his scholarship was poor and likely to lead boys astray.¹ To this Comenius replied in his *Apologia Latinitatis*, and, anxious to leave his enemies no case against him, he followed this up by his *Ventilabrum Sapientiae*,² in which he subjects his own method to a critical examination and points out his own shortcomings so unsparingly as to leave nothing for the ill-disposed to say.

He had now finished with the Latin school-books, "from which he had so often turned in disgust,"³ and was free to devote himself to the Pansophia. "Mr. Comen," writes Hartlib to Pell, "to retire himself to give himself wholly to his Pansophia goes this spring to be at Monsieur de Gerre's house for a certain time, where he is provided for as a prince, but nobody knows he is there but we three and one of Comen's amanuenses."⁴ It would have been well had de Geer's sympathy stopped short at the Pansophia. Unfortunately he took quite as much interest in the Revelations and in the cognate doctrine of Chiliasmus, or the one thousand years' reign of peace on earth to be inaugurated by Christ at His second coming, and even invited Drabik to come to Amsterdam.⁵ The year 1656, so fateful to the Unity, had been foretold as that in which

¹ *Op. Did. Omn.* iv. 6.

² 'Ventilabrum Sapientiae sive sapienter sua retractandi ars. Cum adjuncta authoris omnium Didacticarum suarum cogitationum retractatione brevi.'

³ Latinitatis studia mibi toties nauseata.—*Op. Did. Omn.* iv. 6.

⁴ Hartlib to Pell, quoting a letter of Rulice, Vaughan, ii. 448.

⁵ *Ibid.*

the reign of peace was to commence, and when this expectation proved false, 1671 or 1672 was the next date to which Comenius, inspired by Drabik, had given his entire confidence. The alliance of Rakoczy with Charles Gustavus, and the death of Ferdinand II., had given a passing air of plausibility to Drabik's ravings, and poor Comenius finally threw common-sense scruples to the wind and definitely identified himself with the party of prophecy. The publication by him of *Lux in Tenebris*, or the collected prophecies of Kotter, Poniatowska, and Drabik, may have been largely due to de Geer's influence, but it must be borne in mind that men like Thomas Burnet and William Whiston were staunch adherents of the doctrine of Chiliasmus, and that both on the Continent and in England a large number of Protestants had no doubt whatever that Drabik was directly inspired from heaven. "This last week I have twice read the book of Drabicius," writes Beale to Hartlib, "and cannot doubt but, in the main, God is in it." Comenius was now leaving the legitimate paths of Churchmanship and pedagogy, and entering upon the trackless maze of vaticination. Revelation succeeded revelation. "About three weeks ago," writes Hartlib to Pell in 1658, "Mr. Comen did impart unto me a copy of the last three visions of Drabicius from March 8th to September 1st, wherein he says again that the king of France is to be the German emperor." In the following year appeared the *History of the Revelations*; in 1663, the more recent visions of Drabik were given to the public; and, two years later, a complete illustrated edition of all the prophecies up to date, under the title *Lux e Tenebris*, was issued.

In spite of the popularity of these works, murmurs of disapproval were heard in many quarters. Nicholas Arnold, a professor at Franecker, gave vent to his feelings in his *Discursus Theologicus contra Comenium*, and Samuel Des Mares, Professor of Theology at Groningen, published several brochures, in which, however, he was careful to state that the object of his attack was not Comenius, but the Revelations fathered by him. Even in his own

family he met with opposition. We learn from letters of Figulus to Arnold, that his son-in-law had disapproved of the publication of *Lux in Tenebris* in 1657.

It is difficult to understand how Comenius found it possible to do much more work at his Pansophia during these years, since to edit the prophecies and fight their battles with the sceptical must have taken up nearly as much time as to write school-books at Elbing. De Geer, however, seems to have made every arrangement in his power to ensure that the *Universal Knowledge* should be carried to a successful issue. "I still more and more admire the zeal and piety of that admirable man," wrote Rulice to Hartlib in 1658. "I must tell you *in aurem*, if Comen do not mention it, he hath called also Figulus, with his family, hither, and will maintain him only to assist his father-in-law and to know all concerning Pansophia, that if Comen should die or be carried away, he may finish it."

De Geer, in fact, was willing to spend his money on any object that commended itself to his evangelical friends. The Rakoczy family had refused to finance the translation of the Bible into Turkish, but he came to the rescue with his inexhaustible purse. The work was undertaken by a certain Warner, who had travelled in Turkey, and was to be revised by Golius, the well-known orientalist. Hartlib announces this in triumph to Boyle and Worthington. At last the *Deus ex machina*, destined to interpose and strike the final blow at Catholicism, would be instructed in the part that he was called upon to play.

With the publication of the *Opera Omnia Didactica*, Comenius had not entirely ceased to take an interest in matters educational. In 1658 we find him giving practical instruction in his method to Jacob Redinger, master of the Latin School at Frankenthal. Redinger had heard of him from afar, and was not satisfied till he came to Amsterdam to consult the great oracle of school-craft. Comenius's magic influence, that enthralled every school-master with a disinterested love for the profession of education, made a deep impression on him. He became

the most devoted adherent of the new method, and, in his young enthusiasm, brought out an edition of the *Vestibulum* and a German translation of the *Schola Ludus*. A follower of Comenius in one direction, he soon became his disciple in another, embraced the doctrine of Chiliasmus, and joined the crowd of Protestants who, throughout Europe, were eagerly awaiting the fulfilment of the Drabician prophecies.

That the *Pansophia* made but slow progress need cause little surprise, as, in addition to his occupations of a purely theological nature, Comenius had undertaken the task of managing the finances of the Bohemian Brethren. The sympathy of friends in England had not been confined to words, but had led to collections on a large scale. In 1658 £5900, and in the following year £3000, were sent to the Continent in aid of the exiled victims of Catholicism. At the same time, collections were made in Holland and in Switzerland, and the whole sum of money had to pass through Comenius's hands. Applications for assistance poured in from every side, and the aged Bishop had to tear himself from his philosophic labours and undertake the duties of a paymaster-general. From England supplies continued to come in until, in 1661, Charles II., alarmed at the removal of so much money from the country, put a stop to the collection, and impounded the money that was ready for transmission. Needless to say, an indignant letter from Amsterdam remained ineffective and unanswered. In the midst of so many distractions it is remarkable that Comenius, whose health was rapidly failing, found time to conduct some physical experiments on the nature of heat and cold, and to correspond with Robert Dalgarno in England on the subject of a complicated clockwork construction that the latter was devising.¹

Of the last ten years of Comenius's life our information, never very direct or very full, is extremely scanty. His correspondence with Hartlib ceases in 1662, and we are

¹ *The Works of the Hon. Robert Boyle.* London, 1772. Vol. vi. p. 99.

thus deprived of an important source of information.¹ In 1665 death took from him his wife, his friend Dr. Rulice, and his patron Laurence de Geer, and, though the place of the latter was, to a certain extent, supplied by his brother Gerard, who continued to support him in comfort, he must have led but a forlorn existence, an exile from his native land, and the survivor of most of his friends. In his loneliness he devoted himself to his metaphysical writings with all the energy that a feeble old man, whose life had been a perpetual hoping against hope, could muster. His *Janua Rerum* appears to have been completed in 1666, though, if this was identical with a work of the same name that he mentions previously as being in print,² it is impossible to say. The only edition known was published at Leyden in 1681.³ Of this treatise it suffices to say that it is a deductive metaphysic, totally unlike the *Janua Rerum* that he anticipated in his younger days, and that it bears no trace of Bacon's influence. The same may be said of his Pansophic writings, some of which were completed in the same year. Under the title of *A general deliberation for the improvement of the human race*⁴ were comprised six parts, named respectively, *Panegersia*, *Panaugia*, *Pantaxia* or *Pansophia*, *Panpædia*, *Panglottia*, and *Panorthosia*, concluded by a seventh consisting of a general exhortation. If the first two were published during Comenius's lifetime, the editions must have been limited to a few copies, as Buddaeus, in 1702, had to edit the *Panegersia* from the original manuscript,⁵ and of the *Panaugia* there only exists one copy—in the museum at Prague.⁶ The *Panegersia* excited the admiration of Herder,⁷ but it is unnecessary

¹ Hartlib had been in ill-health for some time, and probably died in this year.

² In his letter to the bookseller Montanus (Van den Berge) in 1661.

³ 'Janua Rerum reserata, hoc est Sapientia prima (quam vulgo metaphysicam vocant). Authore J. A. Comenio. Lugduni Batavorum; apud heredes Jacobi Heeneman. Anno 1681.'

⁴ 'De rerum humanarum emendatione consultatio catholica.'

⁵ There is a manuscript copy of the *Panegersia* in the British Museum.

⁶ Kvacsala.

⁷ 'Briefen zur Beförderung der Humanität,' No. 41.

for us to say more than that its contents embody a curious admixture of fantastic metaphysic and weak analogies drawn from the processes of nature. The general drift of the argument is that of the *Via Lucis*, written during his stay in England, and published by Cunrad at Amsterdam in 1668. Of this work Comenius sent a copy to the Royal Society in London, with a letter in which he implored its members not to deal too exclusively with the physical aspect of the universe to the neglect of the more important metaphysical and supernatural side.

He was now seventy-seven years old, but his desire to write and to publish remained as great as ever. His *Unum Necessarium*, a religious work, appeared in 1668, and in the following year he again plunged into controversy with a tract¹ directed against Samuel Des MARETS, who still persisted in his sceptical attitude towards the prophecies and the chiliastic doctrine. The result of this brochure was startling. Des MARETS lost his temper completely, and in his reply *Antirrheticus* he quits the ground of argument and assails Comenius's personal character in a manner quite unjustifiable, if the age and failing strength of his antagonist be considered. After terming Comenius "a fanatic, a visionary, and an enthusiast in folio," he proceeds, "I would venture to say that by feeding one family, that of de Geer, on pansophic hope, and by nourishing it or rather bewitching it with chiliastic smoke and Drabik's prophecies, he has been able to make a yearly income three or four times as great as the salary that I receive from the government."²

The sharp tone of this attack cut Comenius to the quick. Forlorn, and on the verge of the grave, he had neither the force nor the inclination to rebut the insinuations of dishonesty that it contained. Some consolation in his distress he may have derived from the society of the aged

¹ 'De Zelo sine scientia et charitate, admonitio fraterna J. A. Comenii ad D. Samuelum Maresium : pro minuendis odiis et ampliandis favoribus.'

² Bayle, *Dictionnaire historique et critique*. Vol. ii. page 884, note.

French prophetess and visionary, Antoinette Bourignon, who had recently come to reside at Amsterdam; but his life was burning low, and not even the fuel of fanaticism was able to revive the flame. Early in the year 1670 his son-in-law Figulus died, and, on the 15th of November, the last Bishop of the Moravian Brethren quitted that life in which every ambition that he entertained had been doomed to disappointment. He was buried at Naarden, near Amsterdam, on the 22nd of November.

It was a strange account on which the ledger had closed. For himself, Comenius was a failure, and his life bankrupt; not so for mankind. The despised pedagogy, the “puerilia illa mihi toties nauseata” have laid posterity under an eternal obligation, and have given the deepest possible meaning to the words of Leibnitz,

“Tempus erit, quo te, Comeni, turba bonorum.
Factaque spesque tuas, vota quoque ipsa colet.”¹

Of Comenius's descendants little is known. His son Daniel was ordained, and died in 1694, but these two facts exhaust the material for his biography. Nor have we much more information about the fate of his literary remains. Gerard de Geer's interest in the Pansophic writings did not cease with the death of their author, and he entrusted the arrangement and publication of the manuscripts to a certain Nigrinus, who appears to have found his task a difficult one, owing to the complex nature of the plan that Comenius had been trying to work out. In 1677 he announced that the *Panorthosia* was completed, but no trace of its publication remains. In 1680 he brought out a *Specilegium Didacticum*,² giving the scheme of the didactic works. If he was responsible for the *Janua Rerum* that appeared in 1681 it is impossible to say.

¹ Leibnitz, *Coll. Works*, Ed. Pertz, Vol. iv. p. 270.

² ‘Specilegium Didacticum artium discendi aut docendi summam brevibus præceptis exhibens.’

We now approach the question, "What was the effect of the personality and of the theoretic writings of Comenius on the generation that immediately succeeded him, and on the following century?" The answer is somewhat surprising. The man whom we unhesitatingly affirm to have been in his day the broadest-minded, the most far-seeing, the most comprehensive, and in some respects the most practical of the writers who have put pen to paper on the subject of education, the man whose methods were used in the new elementary schools of the nineteenth century, and whose theories underlie much of our modern school-organisation, who embodies the materialistic tendencies of our "modern side" instructors, while avoiding the narrowness of their reforming zeal, who lays stress on the spiritual aspect of true education while he realises the necessity of equipping his pupils for the rude struggle with nature and with fellow-men—Comenius, we say, the prince of schoolmasters, produced practically no effect on the school-organisation and educational development of the following century. His school-books, frequently reprinted, were thumbed for years to come by boys in every corner of Europe; but the theoretic works, *The Great Didactic*, *The Newest Method of Languages*, *The Mother School*, remained unknown and ineffective. For all the result that they produced, they might as well have perished in the flames at Lissa.

The cause of this is not far to seek. If we have laid stress on his entanglement with the prophet Drabik, the reason has been less the intrinsic value of that worthy's revelations than their effect on the reputation of his unfortunate dupe. Comenius was not alone in believing them to be heaven-sent. As we have seen, the prophet had a large following. Few members of the Bohemian Church but had followed the example of their bishop, and put their faith in the misty fabrication; and throughout Europe, Protestants, if not convinced of its truth, awaited the future with interest.

Imagine the effect produced, when, eight months after Comenius's death, Drabik formally retracted all the prophecies and went over to the Roman Catholic faith.

The reaction was terrible. The remnant of the Moravian Brethren, who felt they had been duped, laid all the blame upon their spiritual guides. In Hungary, a minister who had been a keen partisan of Drabik's was dismissed from his office. Daniel Comenius, anxious to go to Hungary, was warned by his friends that his life would scarcely be safe there; while his father's efforts and sacrifices on behalf of his flock were forgotten in the virtuous indignation that was showered on his want of judgment. Worse than this, the dictionary-makers, biographers, and historians, who should have been the guardians of his fair fame, either took their impressions from the hostile tractates of his enemies, or, in ignorance of his theoretic works, measured his value as an educationist by their peddling standard of correct Latinity. "He worked at a *Pansophia*," wrote Morhof, in 1688, "which he left only half finished. He wrote a *Prodromus* to it, and this, together with some other philosophic matter, he published at Amsterdam in folio." "His *Janua* is full of barbarisms, which he tried in vain to defend; for his *Apology* stands itself in need of one. He also wrote a *Physic remodelled in accordance with Divine Light*. . . . I praise the man's piety, but piety alone will not do everything."¹

The whole of his writings on the theory of education alluded to as "some other philosophic matter"! This is bad enough, but worse was to follow. The sceptical Bayle, writing in 1697, gets the greater part of his material from Des Maret's *Antirrheticus*, and treats the angry retort of an antagonist as a reliable estimate of Comenius's character. Des Maret gets a special word of praise. "On ne sauroit assez louer notre Des Maret," he writes, "de sa vigueur contre les Enthousiastes et contre les annonciateurs de grandes révolutions. On a pu voir comme il poussa Comenius."² Of the Amsterdam folio he says, "C'est un ouvrage in folio divisé en quatre parties

¹ Morhof, *Polyhistor literarius, philosophicus, et practicus*. Lubecæ, 1688, pp. 119, 120.

² Bayle, *Dictionnaire historique et critique*. Rott. 1697, ii. 559.

qui coûta beaucoup de veilles à son auteur, et beaucoup d'argent à d'autres et dont la République de lettres n'a tiré aucune profit ; et je ne crois pas même qu'il y ait rien de praticable dans les idées de cet auteur.”¹

In the eighteenth century Bayle's Dictionary was widely circulated, and ignorant readers readily acquiesced in the estimate given to Comenius's character and merits. In 1742 a protest was raised by Paul Eugene Layritz, school-director at Nuremburg, under the title *Vindication of the Memory of Comenius*,² but this was unable to counteract Bayle's influence, and a still more deplorable fate awaited the unhappy pedagogue. Adelung, in his *History of Human Folly*,³ gives him a prominent place, and classes him with magicians, alchemists, and soothsayers—a truly humiliating position for the father of modern education.

To be abused tries one's temper, but need not diminish one's self-esteem ; to be misunderstood may embitter a disposition, but need not shatter a sense of merit ; but to be absolutely ignored presents no element of compensation, and this is what befell Comenius at the hands of his successors in the path of school reform. While the pedagogic writers of the seventeenth century were firm believers in the continuity and organic development of educational theory, those of the eighteenth to a large extent ignored the efforts of their predecessors, and were at no pains to discover if the principles that they enunciated had already been worked out by others. A. H. Francke mentions the *Unum Necessarium*, but never alludes to the *Great Didactic*. Had Rousseau been put through a course of Comenian method, his *Emile* might have lost in paradox and in piquancy, but the educationist would have gained, where the lover of polite literature lost. In *How Gertrude*

¹ Bayle, *Dictionnaire historique et critique*. Rott. 1697, i. 883.

² ‘Manes Comenii vindicati, ejusque docendi discendique methodus a Petri Baylii injuriis liberata,’ 1742.

³ Adelung's ‘Geschichte der menschlichen Narrheit, oder Lebensbeschreibungen berühmter Schwarzkünstler, Goldmacher, Teufelsbanner, Zeichen- und Liniendeuter, Schwärmer, Wahrsager, und anderer philosophischen Unholden.’ Leipzig, 1785.

Teaches her Children, Pestalozzi, from a different point of view, enunciates principles that have much in common with those of the *School of Infancy*, and, had Pestalozzi been led to study the *Great Didactic*, he would probably have confined himself to the development, on the subjective side, of the objective principles embodied in that treatise. Subsequent writers were wittier than Comenius, none possessed, in combination, his sympathy with children, his power of analysis, and his breadth of mind.

It is only recently that Comenius has been rediscovered. Von Raumer in his *History of Pedagogy* (1843) was the first to attract attention to the surpassing merit of the *Great Didactic*, and since then several translations of that work and a voluminous Comenian literature have appeared in Germany. In 1841 Professor Purkyňe found the manuscript of the Bohemian *Didactic* at Lissa. It was published at Prague in 1849, and has since been twice reprinted. The *School of Infancy* was translated into English by D. Benham in 1858, and more recently Professor Laurie has provided the student with an admirable epitome of the Amsterdam Folio of 1657. In the present volume, the *Great Didactic* is presented to English readers for the first time.

INTRODUCTION

II

HISTORICAL

WE have already traced the growth of Comenius's Educational Theories, and pointed out his debt to contemporary writers, notably in the case of the *Janua Linguarum*. We will now endeavour to show the general relation in which he stands to his predecessors, to bring into greater relief the condition in which he found schools and school-masters, and to estimate the worth of his school-books for his own age, and of his theoretical writings for all time.

Against Comenius, as against his predecessors and contemporaries, the accusation may be brought that, in spite of professions of a desire to widen the school curriculum and shake off the more binding traditions of the past, he still retained Latin as the concentration-point of his system, and allowed it to usurp more than its fair share of attention. While this charge is to a certain extent justified, a brief consideration of the circumstances will suffice to show that the blame lies less with Comenius than with the strength, born of tradition, that enabled the Latin language to blockade every avenue that led to polite learning or scientific pursuits.

In mediæval times the schools were in the hands of the

monasteries, and Latin was the language of Christendom. After the Renaissance, Latin was the language of culture and opened the door to a more perfect literature than any that existed in the vernaculars. After the Reformation, though banished from the services of Protestantism, it still remained a most important medium of communication between nation and nation. At the present day great stress is laid on the practical value of modern languages, but in the sixteenth century a man furnished with a good colloquial knowledge of Latin might have travelled over Europe with nearly as great comfort as if he had been thoroughly acquainted with the language of each country through which he passed. To write English fluently and well is now of infinitely more value to a man than to have acquired the same proficiency in Latin; but in the sixteenth century the advantage was greatly on the side of the Latin scholar. By sending his son to learn Latin an uncultured parent immediately raised him into a higher sphere of society and placed in his hands a passport which secured admission where the language of the country invited rebuff.

But the study of Latin in the latter half of the sixteenth century was very different both in manner and method from that of the monkish schools. Up to the time of Comenius, and indeed till very recently, grammar was allowed to usurp far more than its due share of the school programme; but in mediæval schools it was the chief subject taught, sometimes indeed the only one. A slight knowledge of arithmetic sufficed to enable the future monk to make the *computus* or calculation necessary for ascertaining on which days the festivals of the church should fall, and the remainder of his energies he was forced to devote to Priscian or Donatus. The work of the latter, *De partibus orationis pars minor* had been arranged in 2645 leonine hexameters by Alexander de Villa dei in 1199, and under the name of the Doctrinal was the staple grammar for nearly 300 years. The school-books bought for the Dauphin in 1484 consisted of "Ung A, B, C, Ungs

sept pseaulmes, Ung Donast, Ungs accidens, Ung Caton, and Ung Doctrinal.”¹

Another famous Grammar was the *Græcism* of Ebrard, written in 1212. It was still in use at Deventer when Erasmus was at school there in 1476,² and was popular in the Parisian schools until the end of the fifteenth century.³ This work,⁴ a bulwark of linguistic training in the fourteenth century, commences with a metrical treatise on grammatical forms, each of which is labelled with a Greek name. This is followed by chapters nominally on the declensions and the conjugations, but really on the exact meanings of words that resemble one another. Its editor, Johannes Vincentius Metulinus, who had a high opinion of its merits, introduces it as follows:—

Hic liber Ebrardi Celebris : doctique magistri
Græcismus fons est : arida corda fovens.
Cujus in irriguo tu margine sisteris : a quo
Sumere grammatices plura fluenta potes.⁵

Here is a sample of the draughts of grammar that he who stands on the brink may quaff. In chap. i., *De figuris*, we are informed that :

Sincopa de medio tollit quod epenthesis auget :
Aufert apocope finem quem dat paracope.

Pages of this stuff had to be learned by the unfortunate scholar, nor was his case much better when he came to the grammar proper. In chap. xvi., under the heading *De verbis secundæ conjugationis*, he was given the following information:—

Hortibus insideo : pius medicus assidet egro ; (sic)
Subsidet his caro : presidet ille solo.
Obsidet hic muro : considet ille loco,

¹ ‘La vie privée d'autrefois ; Écoles et Collèges, par Alfred Franklin,’ p. 153.

² ‘Prælegebatur Ebrardus et Joannes de Garlandia. Vita Erasmi. Erasmo auctore.’

³ ‘Les colloques scolaires du seizième siècle.’ Massebieau, p. 21.

⁴ ‘Libri Ebrardi Greciste.’ (Adv. Lib. Edin. No date or place.) Massebieau quotes an edition of 1487. ⁵ Preface ad init.

and so forth. The so-called grammar is little more than a vocabulary, in which the words are strung into rude verses illustrating their usage.

The other bugbear of Erasmus's childhood was John de Garlande. Garlande was the author of a *Compendium Grammaticæ* and of an epic poem entitled *De Triumphis Ecclesiae*. The latter may well have been among the works that the student was expected to read, as its subject-matter would have removed any prejudice to which its monkish eccentricities might have given rise.¹ The main object of learning Latin was to read Ambrose and Hilary. As late as 1523 we find Vives recommending the poems of Prudentius, Sydonius, Paulinus, Arator, Prosper, and Juvencus, as being equal to the classics in style and infinitely superior in matter.²

The Reformation may have been prejudicial to the advancement of Humanism at the higher seats of learning, but to schools it was the breath of life. Though a few sensibly-managed institutions were to be found, such as the Collège de Guyenne at Bordeaux, these were great exceptions. In the schools attached to the monasteries prejudiced monks would have little to say to the new learning, looked on it with suspicion, and deemed it safer to abide by Ebrard and the Doctrinal.

But a more energetic man than Erasmus was to turn upon them and tear their pedantry into shreds. Martin Luther had been subjected to the mill of scholasticism, and grammar-lessons, flogged in with the customary vigour, had left an iron impression on his soul. "Instead of sound books," he cries in 1524, "the insane, useless, harmful, monkish books, the Catholicon,³ the Florista, the Græcista,

¹ It contains "retrogradi Versus," such as:—

Parisiis proba non pugnat gens parcere clero
Provida, non curat perfidiam sua lex.
Lex sua perfidiam curat, non provida clero
Parcere, gens pugnat non proba Parisiis.

Wright's Ed. p. 41.

² 'Jo. Lodovici Vivis Valentini Opera, in duos distincta tomos. Basileæ, 1555,' i. p. 7.

³ 'A Grammar and Vocabulary,' by John Balbi, printed by Gutenberg in 1460.

the Labyrinth, the Dormi secure, and such-like stable-refuse have been introduced by the devil, so that the Latin tongue has decayed, and in no place is any good school or instruction or method of study left.”¹

With his wide-minded contempt for petty details he would have wished to abolish the formal study of grammar altogether. The books to be used are “the poets and orators, be they Christian or heathen, Greek or Latin. From these the grammar must be learned.”² Now, while it is certainly a grievous error to sacrifice the whole morning of youth to the study of grammar, it is also evident that to neglect it altogether could only lead to a slipshod habit of mind in later years. A corrective for Luther’s complete carelessness of academic accuracy was at hand in Philip Melanchthon, the grammarian of the Reformation in Germany, whose Latin Grammar appeared in 1525.³ Melanchthon, while attaching the utmost importance to grammar, was fully aware how necessary it was to make rules as short and concise as possible. Other Grammars, he tells us, existed, but most of them were neglected on account of their length, and he had therefore written his to supply the practical wants of the age.

In truth the Grammar of 1525 is many centuries in advance of the shibboleth that Erasmus learned at Deventer. Apart from its intrinsic merit, Melanchthon’s name on the title-page would have secured its widespread use in Protestant schools. It underwent many editions, notably that by Jacob Micyllus, and was still in use at the beginning of the eighteenth century. Worthy of notice is the relative importance given to the rules for gender (these take up thirty-three pages), and the introduction of words like *Halec*, *Huber*, *Lafer*, and *Meninx*; but the main interest of the work lies in its preface, which embodies Melanchthon’s views on the study of grammar. “Of what importance it is to Christ’s

¹ ‘An die Rathsherren aller Städte deutschen Landes, dass sie christliche Schulen aufrichten und halten sollen.’

² *Ibid.*

³ I quote from the Paris edition of 1643.

Church," he says, "that boys be rightly instructed in grammar! . . . How many grievous errors I might relate that have wrought great havoc in the Church, and that have arisen solely from ignorance of grammar!" More than this, grammar is made an indispensable preliminary to knowledge of any kind. "A defective grounding in grammar leads to a most impudent misuse of other studies."¹

Melanchthon was not without competitors. We find Vives² (1523) recommending Catherine of Aragon to get Thomas Linacre's Grammar for her daughter Mary; and elsewhere³ he says that any one may be selected from among those of Perottus, Aldus, Nebrissensis, Mancinella, Sulpitus, Melanchthon, and Ninivita. The Grammar of the last mentioned, who is better known as Despauter,⁴ was for a long time in vogue, both in France and in Germany. An abridged edition was brought out by Sebastian of Duisburg in 1534, and was used in Scotland as late as 1637.⁵ It is greatly inferior to Melanchthon's Grammar, and burdens the mind of the student with an inordinate quantity of mnemonic verses.⁶ It is surprising to what an extent the notion prevailed that grammar should be made as complex as possible. Few scholars would care to name off-hand the seven genders in Latin, yet this was the number commonly

¹ Qui non recte Grammaticen didicerunt, postea cæteras disciplinas audacissime corrumpunt.

² *Opera*, vol. i. p. 5. Buchanan also recommended Linacre's Grammar, and brought out a Latin translation of it, printed at Paris in 1533.

³ *Ibid.* p. 10.

⁴ His full name was Joannes Despauterius Ninivita. He flourished in Holland, 1460-1520.

⁵ I have before me a copy entitled, 'Joan. Despauterii Ninivitæ, Grammaticæ Institutiones, Lib. vii. Docte et concinne in compendium redacti, per Sebastianum Duisburgensem, multo quam antea castigatiores. Edinburgi. Sumptibus Hæredum Andree Hart. Julij 25. Anno 1637.'

⁶ The following are good examples, taken from the rules for the 3rd declension:—

Tertia dat varios fines, dans is genitivo,
Græcorum patrius vel in os, vel in i vel in us fit.

or

Em dat et im buris, pelvis cum clave securis
Et puppis, turris, restis: sic febris, æqualis,
Sic pestis, navis, tor quis conjunge bipennim.

given in sixteenth-century works. Even in 1633 a Scotch Grammar¹ tells us that “the genders are seven in number: masculine, feminine, neuter, common of two, common of three, promiscuous, and doubtful.” At this rate, why stop at seven? It is surprising that the writer did not bring their number up to twenty-one and work them into a mnemonic verse. For the beginner seven genders must have been a more crushing burden than the *As in præsenti* that caused such agony to our grandfathers.

The set of metrical rules beginning with this locution, as well as the *Propria quæ maribus*, were by Lily, one of the first masters at St. Paul's School and afterwards high-master of Wolsey's school at Ipswich, and are often found affixed to his *Brevissima Institutio*, the most popular Grammar ever written and the basis of the Eton Latin Grammar published in 1826.

Lily's work appeared in many forms. The edition of 1577² is in English with a Latin appendix, and is prefaced by an injunction of Elizabeth “Not to teache your youth and scholers with any other Grammar than with this English introduction hereafter ensuing, and the Latine Grammar affixed to the same.” The use of the *Brevissima Institutio* was confined to England, but Lily's Syntax met with considerable success on the continent. An edition³ was brought out by Erasmus at Strasburg in 1515, and was afterwards reprinted at Basle, Paris, Antwerp, and Cologne.

We cannot leave Lily without giving some account of his rules *Ad discipulos de moribus*. These survey the whole field of school morality in elegiac verse.

¹ ‘Rudimenta Grammatices in Gratiam juventutis Scotiae conscripta. Edinburgi. Excudebat Joannes Wrentoun. 1633.’

Quid adfers de genere? Genera sunt numero septem: Masculinum, Fœmininum, Neutrum, Commune duum, Commune trium, Promiscuum, et Dubium.

² ‘A short introduction of Grammar generally to be used, compyled and set forth for the bringing up of all those that intend to attayne the knowledge of the Latin tongue.’ London, 1577.

³ ‘Absolutissimus de octo Orationis partium constructione libellus, nuperrime recognitus. Argentorati, 1515.’

Scalpellum, calami, atramentum, charta, libelli,
 Sint semper studiis, arma parata tuis.
 At tamen in primis facies sit lota manusque
 Sint nitidæ vestes, comptaque cæsaries.

With Lily, as with the continental educationists, a colloquial knowledge of Latin was highly prized—

Et quoties loqueris, memor esto loquare Latine
 Et scopulos veluti barbara verba fuge.

For the boy who prompts in class a terrible punishment is threatened—

Nec verbum quisquam dicturo suggerat ullum
 Quod puer exitium non mediocre parit.¹

Comenius's complaint that the beginner in Latin was compelled to learn the unknown through the medium of the unknown, does not apply with very much force to England. As early as 1495 we find a black-letter treatise, *Pervula*² by name, giving the rules of syntax in English. Nothing could be simpler or more explicit than the proposition with which it starts. "What shalt thou doo when thou hast an englyssh to be made in latyne? I shall reherse myn englysshe fyrist ones, twyes, or thryes, and loke out my princypal verbe and aske hym this question, who or what. And that worde that answeryth 'to the questyon shall be the nominatyf case to the verbe.'

In English is also the curious Grammar and Syntax by M. Holt, entitled *Lac Puerorum*.³ On the subject of gender Holt exercises a rare restraint and only inflicts one page on the learner; but his pent-up passion for analysis bursts forth when he comes to the moods, and he introduces us to "the shewynge mode," the "biddynge mode," "the askynge mode," "the wysshynge mode,"

¹ Appendix to Wolsey's *Rudimenta Grammatices*, 1529.

² 'Pervula. Printed at Westmynstre in Caxton's house by Wynkyn de Worde.'

³ 'Lac Puerorum. M. Holti. Mylke for children. 1510. Emprynted at London by Wynkyn de Worde in Flete Strete in the sygne of the sonne.'

“the potencyal mode,” and the “subjunctyf mode.” A heavy burden for the boy who cannot yet conjugate *Amo*.

That it is in English and, from the book-fancier’s point of view, its rarity claim notice for Linacre’s Grammar,¹ but otherwise this work is not superior to other Grammars of the age. In company with those previously mentioned it is scarcely worthy of remark by the side of the Grammar² written by Cardinal Wolsey for his school at Ipswich. An almost touching simplicity breathes through the pages of his little volume, showing the great Cardinal in a most pleasing light as the sympathiser with blundering boyhood. In the preface he confesses that Grammars exist in abundance, but he considers them unsuitable for beginners, for whose need he therefore takes it upon himself to cater. “In which lytel boke I have left many thynges out of purpose, consydering ye tendernes and smal capacite of lytell myndes.” He then proceeds to state the rudiments of grammar in the simplest way imaginable. *Musa* is declined in full, and the conjugations of the regular verbs are given at length. The inevitable “seven genders” make their appearance, it is true, but no time is wasted over them. This Grammar does not appear to have been as popular as its contemporaries, still it is quite the best written for beginners before the *Vestibular Grammar* of Comenius.

In Scotland, Latin appears to have been the medium through which the rudiments were learned, though vernacular grammars were not unknown. In 1528 John Vaus, master of the Grammar School at Aberdeen, published a Grammar³ a large part of which is in Scotch; and there is in existence

¹ ‘Linaci Progymnasmata grammatices vulgaria. Emprynted in London on the sowth syde of paulys by John Rastell, with the privylege of our most suverayn lord Kyng Henry the VIII. graunted to the compyler thereof.’

² ‘Rudimenta grammatices et docendi methodus, non tam scholæ Gypsuichianæ per reverendissimum Thomam Cardinalem Eborem feliciter institutæ quam omnibus aliis totius Angliæ scholis præscripta. Peter Treveri. 1529.’

³ ‘Rudimenta puerorum in artem grammaticam per Joannem Vaus Scotum.’ Paris, 1528.

a fragment of a *Donatus* written in Scotch, which has been hypothetically placed as early as 1508.¹

Of mathematics and science, the subjects that form the backbone of a "modern side" curriculum, only the first was in a sufficiently advanced state to be even given consideration as a subject of school instruction, and it is improbable that boys were taught more than the barest elements. Indeed there appears to have been a considerable amount of prejudice against mathematics as a means towards general culture. "Mark all mathematical heads, which be only and wholly bent to those sciences," writes Ascham in the *Scholemaster*, "how solitary they be themselves, how unfit to live with others, and how unable to serve in the world." Many educationists, however, were not of this opinion, and efforts were made by the more far-seeing among them to render the study of numbers more accessible to the beginner. In 1522 Cuthbert Tonstall, afterwards Bishop of London, published his *Arithmetic De arte supputandi*. Written for boys (Tonstall suggests that it may be of use to Sir Thomas More's sons), it is very practical, and well suited for school use,² and was far ahead of anything else that had been written on the subject. Sturm thought so highly of it that he brought out a reprint at Strasburg in 1544,³ and in his preface assured the public that the book was the best in the market, and that any student who mastered it would know all that was to be known on the subject.⁴

It must be confessed that in the sixteenth century the advocates of arithmetic as a study laid more stress on its

¹ 'Notes on a leaf of an early Scottish *Donatus*, printed in Black Letter. By E. Gordon Duff, Edinburgh Bibliographical Society. Session 1892-93.'

² It contains a large number of exercises on the various rules given. De Morgan says of it: "For plain common-sense well expressed, Tonstall's book has never been surpassed in the subject of which it treats."—*Arithmetical Books*, p. 13.

³ 'De arte supputandi, Libri quattuor, hactenus in Germania nusquam ita impressi. Argentorati, 1544.'

⁴ Nec abest longe a perfectione, qui ejus praecepta intelligit.—Sturm's preface.

practical and commercial worth than on its value as a factor in the expansion of the mental powers. Cardinal Sadolet, writing in 1549, points out the necessity of adding arithmetic to the school curriculum, but only because without its aid we cannot tell how many fingers we have or with how many eyes we see.¹

On this position a great advance is made by Robert Recorde, who published his Arithmetic in 1561 under the title *The Grounde of Artes*. According to Recorde the great claim of arithmetic is that it exercises the mind purely, apart from lines as in geometry and from spheres and axes as in astrology.² The capacity for mathematics is the special prerogative of man. “Whoso setteth small price by the witty device and knowledge of numbring, he little considereth it to be the chief point (in manner) whereby men differ from all brute beasts; for as in all other things (almost) beasts are partakers with us, so in numbring we differ cleane from them and in manner peculiarly, sith that in many things they excell us againe.” It must not be imagined from this quotation that the *Grounde of Artes* is of a philosophical nature. It is a very practical arithmetic, and is of special interest as being written in English. In his work on algebra also, *The Whetstone of Witte*, published in 1557, Recorde discards Latin in favour of the vernacular.

In France a staunch upholder of mathematics was that many-sided man of learning, Peter Ramus. Himself the author of an Arithmetic,³ he was at some pains to ascertain the modes of instruction most approved of in other countries. In a letter to John Dee, dated 1565, he begs him to say what old mathematical books he has in his library, who are the teachers of mathematics in English

¹ Cujus usus ita necesse est ut videamur absque ea ne quot digitos quidem habeamus in manibus, aut quot oculis intueamur scire posse.—
‘De Liberis recte instituendis Liber. Jacobi Sadoleti Opera. Moguntiæ, 1607,’ p. 547.

² Preface to *The Grounde of Artes*.

³ ‘Petri Rami Arithmetices Libri duo, et Algebrae totidem.’ De Morgan says this was published in 1584.

grammar schools, and what method they follow.¹ In Germany, at a rather later date, the *Arithmetic*² of Christopher Clavius, a Jesuit priest, went through many editions, though it is difficult to say if it was used outside the Jesuit schools. It is worth noting that Alsted, Comenius's teacher at Herborn, wrote several works on mathematics,³ though these were for more advanced scholars.

The question now arises, "By what method or system of teaching were these books backed up? What pains were taken to ascertain the difficulties of the individual school-boy and remove them by timely explanation?"

The answer is as simple as it is unsatisfactory. In every difficulty or dilemma the one resource of the school-master was the stick. Between recalcitrant school-boys and ignorant teachers the friction was great, and the sturdy use of the cane proved the readiest way to disperse the evil humours of the master. Witness the complaint of Ascham: "The scholar is commonly beat for the making, when the master were more worthy to be beat for the mending or rather marring of the same: the master being many times as ignorant as the child what to say to the matter."⁴ In France the same complaint was made. "Those daily and severe floggings," wrote Maturin Cordier, "deter simple-minded youths from the study of letters to such an extent that they hate school worse than a dog or a snake."⁵ From time to time protests were raised against this process of brutalising children; but the general tendency of the age was to believe that a little physical

¹ 'Petri Rami Professoris Regii, *Præfationes*, etc. Parisiis, 1577. P. 204. Petrus Ramus, Joan. Dio Londinensi.' "Itaque gemino pigno amore erga me tui obligatus mihi videbor, si hoc utrumque abs te impetravero, et qui sunt e veteribus in bibliotheca tua scriptores mathematici, et quinam in vestris gymnasiis, quaque auctoritate mathematicas artes profiteantur."

² 'Christopheri Clavii Bambergensis e Societate Jesu, *Epitome Arithmeticae practicæ*,' 1st ed. 1583 (the edition before me is of 1607).

³ 'Methodus admirandorum Mathematicorum, novem libris exhibens universam Mathesim.' Herborn, 1641. (De Morgan.)

⁴ Ascham, *Scholemaster*.

⁵ 'De corrupti sermonis emendatione.' Paris, 1530. Preface.

pain, judiciously applied, was worth much persuasion of a gentler kind. Instructive in this connection is the conversation between Sir William Cecil and his friends reported by Ascham in the preface to his *Scholemaster*. “I have strange news brought me this evening,” says Cecil, “that certain scholars of Eton be run away from the school for fear of beating.” To this Mr. Peter replied that “the rod only was the sword that must keep the school in obedience and the scholars in good order”; while Mr. Haddon went so far as to say that the best schoolmaster of their time (Nicholas Udall) was the greatest beater.

Small wonder that the boys left the Grammar School “great lubbers, always learning and little profiting!”¹

Machyn, writing in 1563, quotes a typical case of brutality: “A schoolmaster that had a child to lerne, and for a small fault did bett him so severely with a leden gyrdyll with buckles that he left no skyne on his body.” Even for the sixteenth century this seems to have passed the limits of legitimate severity, as we read that “thys master was sett on the pelere and wyped that his blude ran downe.”² This was certainly a curious way of maintaining the doctrine that corporal punishment should be sparingly administered.

The extensive use of Latin as a medium for imparting knowledge was frequently brought forward by reformers, and in particular by Comenius, as the reason why beginners made such slow progress. To a certain extent they were undoubtedly right. Many Grammars and Arithmetics were written in Latin, and though constant exercise in that language may have been of use to the more advanced student, the combination of a new tongue and a new subject must have had a disastrous effect on younger boys whose knowledge of Latin was limited.

It would, however, be an error to lay too much stress on this point, as there is evidence that side by side with the enthronement of Latin there was a strong under-

¹ *Scholemaster*, Bk. ii.

² *Machyn's Diary*, 1563.

current of feeling in favour of the vernaculars. In England the use of the English language in learned works found a strong upholder in Peter Levins.¹ In the Preface to his *Pathway to Health* (1587) he avers that those who think that such books should be written in an unknown tongue, and thus hide the knowledge of health from the people, are guilty of "malice exceeding damnable and devillish." Some years previously (1570) Levins had brought out an English-Latin dictionary with the title *Manipulus Vocabulorum*. "This," he tells us in his Preface, "I brought out for conscience sake, thinking that when I have bene long conversant with the schooles and have from tyme to tyme lamented to see the youth of our country (in the studies of the Latin tong) lacke such little instruments as this fit and needful for their exercises, and saw no man set his hand to the same, I was bound for the portion of my small talent to do somewhat therein."²

If Levins thought that his was the first English-Latin dictionary he was mistaken, as nearly 100 years before (1499) Pynson had printed the *Promptuorium parvulorum sive clericorum*.³ But the English used in this lexicon was the Norfolk dialect, and the work was more suitable for older students than for boys.

To the Latin grammars written in English reference

¹ According to Anthony à Wood, Levins taught a Grammar School.

² A quotation from this dictionary may be of interest. It is arranged, not alphabetically, but in accordance with the termination of the words, forming in fact a kind of rhyming dictionary; e.g.

Coste	Sumptus -us
The frost	Gelu -us; hoc Frigus
A ghoste	Spiritus -us. Larva.
An hoste of men	Exercitus
An hoste	Hospes, hospitis, etc.

³ 'Promptuorium parvulorum sive clericorum. Auctore fratre Galfrido Grammatico dicto. 1440.' A short extract will indicate its nature:—

Byryele	Sepulchrum, tumulus
Byrthe	Nativitus, partus
Byschelle	Modius, chorus, busellus
Bysshope	Episcopus, antistes, pontifex, presul

has already been made, and as regards arithmetic, Tonstall tells us that there was scarcely a nation that did not possess a vernacular treatise on that subject.¹ If further proof is necessary that Latin had never become so fashionable in England as on the continent it can be found in the *Gouvernour* of Sir Thomas Elyot, and in Ascham's *Scholemaster*. Ascham seems to have been apprehensive that scholars on the continent might think an English setting somewhat undignified for so academic a theme as Education, and in a letter to Sturm at Strasburg he instances the uncultured condition of England as his excuse. He was writing "for Englishmen and not for foreigners,"² and wished to be understood. In France, where the Latin of the Renaissance had taken a far stronger hold, Montaigne had advanced precisely the same reason for writing his essays in French. He was addressing a French and not a European audience. Rabelais had chosen the language that they despised as an instrument for the abuse of pedants and scholastics. In the Collège de France, founded in 1529, Francis I. had ordained that the lectures should be given in French and not in Latin. Peter Ramus (Pierre de la Ramée) Latinised his name and wrote in Latin, but this did not prevent him from bringing out a French Grammar in 1562.³ A cursory glance at the list of their publications would not lead us to suppose that Robert and Henry Estienne give much thought to their native language. Yet Robert Estienne published his *Traicté de la Grammaire Française* in 1569, and his son Henry gives us to understand that French was already ousting all other languages as a refined medium of expression. "It is proverbial," he tells us, "that the Italians bleat, the Spaniards groan, the Germans howl, and the

¹ Nulla pene natio est quæ non eam artem vulgi lingua scriptam habeat.—*De arte supputandi*, Preface.

² Et quia meus hic Præceptor non e Græcia, non ex Italia accersitus est, sed in hac barbara insula natus, et domi intra parietes meos altus est, propterea barbare hoc est Anglice loquitur. . . . Nostris non alienis, Anglis non exteris scribo.—Letter to Sturm.

³ Published by André Weckel at Paris.

French sing."¹ In 1549 Joachim de Bellay had written his spirited *Défense et illustration de la langue Française*, in which he is at pains to prove "que la langue Françoise n'est pas si pauvre que beaucoup l'estiment."² In his intense desire that his countrymen shall write in French he advances the somewhat paradoxical "argument to show that, in view of the present "literary competition," French writings have the best chance of surviving. "Vrai est que le nom de cesluy cy (*i.e.* the author who writes in Latin) s'estend en plus de lieux; mais bien souvent comme la fumée qui sort grosse au commencement, peu à peu s'esvanouit parmy le grand espace de l'air, il se perd ou pour estre opprimé de l'infinie multitude des autres plus renommez, il demeure quasi en silence et obscurité."³

These objections to the encroachments of the Latin tongue were largely due to a patriotic desire to dethrone a language whose tendency was to usurp for itself all the high places in literature. Another argument on the same side, the plea of lack of time, had already begun to make itself heard. Merchants wanted to give their sons a good education, but, as they needed their assistance at an early age, grudged the inordinate length of time that had to be spent before good scholarship could be attained. "My father wished to see my learned education completed in one year," says the school-boy in Cordier's *Colloquies*, when told what a long business it is to learn Latin colloquially.⁴

In Germany the vernacular was more backward in asserting itself. Luther's sermons and hymns were a powerful factor in the development of German style, but the troubled state of the country during the following century hindered any progress towards the refinement of the language. The foundation of the *Fruchtbringende Gesellschaft*, a kind of "academy" organised at Weimar in 1617 by Ludwig,

¹ *Projet du livre intitulé 'De la precellence du langage Français.'* Par Henri Estienne. Paris, 1579. Preface. 'Balant Itali, gemunt Hispani, ululant Germani, cantant Galli.'

² Pt. i. ch. 4.

³ Pt. ii. ch. 12.

⁴ Cordier, *Colloquies*, iii. 31.

Prince of Anhalt-Köthen, marks the first effort to purify the German tongue and set it on a firm basis.

It must be confessed that the earlier humanists had not so much wished to impede the use of the vernaculars in Europe, as to add another language to those already in "vogue." "Just as a gem set in a gold ring ornaments it rather than disfigures it," wrote Laurentius Valla in 1450, "so our language (Latin), if added to the vernaculars of other nations, increases rather than diminishes their lustre."¹ Latin, though essentially a scholar's tongue, was not to be treated as a classic language, but was to be placed on exactly the same footing as the vernaculars. To write like Cicero was not sufficient, the accomplished man of letters was also expected to talk like the characters of Terence and Plautus. If the Latin vocabulary of the golden age proved unequal to the heavier demands of sixteenth-century life, it had to be stretched and supplemented by Greek words. Above all, fluency was the great desideratum. In addition to the accuracy that he acquired by a patient study of grammar, of the moods and of the figures, a school-boy had to learn to chatter in Latin without any hesitation and with as much correctness of expression as could be obtained. Some idea of the task thus imposed on teachers may be realised by those who have experienced the difficulty of imparting a colloquial knowledge of French or German through the medium of class instruction. The humanist schools sought to solve the question by making it obligatory that boys should talk Latin and nothing else during their play-hours as well as in school; but this was very difficult to enforce, and, in spite of the usher with his *tabella delatoria*² ready to report the slightest lapse into the mother-tongue, they drifted into the vernacular on every possible occasion. "Our boys," wrote Cordier in 1530, "always chatter French with their companions, or if they

¹ Laurentii Vallensis, *Elegantia Linguæ Latinæ*, preface.

² Pueri . . . tabellis illis delatoriis ad Latinæ linguae observationem in Gymnasiis adiguntur.—'Commentarius puerorum de quotidiano sermone, qui prius Liber de corrupti sermonis emendatione dicebatur. Maturino Corderio autore. Parisiis, 1541' (1st ed. in 1530). Preface.

try to talk Latin, cannot keep it up for three consecutive words.”¹

It was to remedy this state of things that Cordier compiled, under the title *De corrupti sermonis emendatione*, a French-Latin manual of useful phrases, arranged under a variety of headings. The Latin is not always of the most academic type, but the sentences were doubtless useful to boys whose vocabulary was limited. Thus, in chap. v., under the heading *Beneficiorum, officiorum, et gratificandi*, we find “Tu mas faict ung grand plaisir,” “Magno me affecisti beneficio. Vehementer me oblectasti. Pergratum mihi fecisti.” Chapter ix., under the heading *Cedendi, concedendi, obsequendi*, gives us a remark that only a very priggish boy could have used—“Je confesse que tu es meilleur grammarien que moy,” “Grammaticæ scientiam tibi concedo.” More in sympathy with school-boy nature is the joyful announcement, “Le régent nous a rien baillé à estudier,” “Præceptor nihil dedit nobis ad studiendum” (chap. xix.). That the most renowned schoolmaster of the sixteenth century should render “Je vouldroye que tu disse cela de bon cœur” by “Ego vellem quod tu istud diceres de bono corde” is startling to those who live in an age when the practice of talking Latin, entailing, as it must, much monkish inaccuracy, has fallen into disuse.

Of more importance than this phrase-book were the *Colloquies* by various authors, so much used in schools, even as late as the end of the eighteenth century. These represented conversations between school-boys or young students, and were intended to be learned off by heart, and thus to supply the student with a stock of phrases suitable for use in every-day life. Occasionally, indeed, these dialogues outstripped themselves. Those of Erasmus are conversations of great literary and philosophic merit, and are on this account often unsuitable for school-boys. They were, however, extensively used, and, together with the

¹ Nostros autem cum suis condiscipulis aut Gallice semper garris, aut si Latine loqui tentarent non posse tria verba Latina continuare.—‘Commentarius puerorum,’ etc.

dialogues of Vives,¹ were recommended as an extra study in the Pansophic school. This is the only occasion on which Comenius alludes to the Colloquies. It is, indeed, surprising that he makes so little mention of what must have been one of the most important instruments in the process of teaching conversational Latin.

More practical than either of the above-mentioned works were Maturin Cordier's dialogues.² Cordier did not publish these till 1564, when he was quite an old man. The choice of words and phrases speaks of a long life spent in intelligent teaching, while the vivid descriptions of the life and conversation of the typical school-boy show that Cordier, kindly and observant, did not confine his interest in his pupils to the hours of class-instruction. The anxious parent or schoolmaster desirous to obtain the best Colloquies possible had indeed a long list to choose from. Sturm, to whom Latin conversation was the most important element in education, published his *Neanisci* in 1570, a set of Dialogues that no longer survives since the burning of the library at Strasburg.³ Even Mosellanus, Professor of Greek at Leipzig, published a Pedology⁴ in 1517, though some persuasion had been necessary before he consented to compose it. "For a long time," he writes in his preface to John Polyander, headmaster of St. Thomas' School, who had asked him to write some colloquies, "I resisted your request, as you know, partly because the importance of my occupations made me disdain this work, doubtless useful, but humble and almost mean in appearance, and partly because, not being used to it, I found it difficult to play the part suitably, since I saw that for this kind of comedy a man must become a child once

¹ *Linguæ Latinæ exercitatio*. Pub. in 1539.

² 'Colloquiorum scholasticorum libri quatuor ad pueros in sermone Latino paulatim exercendos Maturini Corderii. Lugduni excudebat Thomas de Straton. 1564.'

³ L. Massebieau, 'Les Colloques Scolaires du seizième Siècle et leurs Auteurs,' p. 61.

⁴ 'Pædologia Petri Mosellani Protegensis, jam denuo in puerorum usum diligenter ædita et recognita. Moguntiæ, 1521.' (Mass. p. 81.)

more."¹ Happily for the Leipzig boys he overcame his contempt for school-book compilation, and has left us a book which, apart from its educational merits at the time, is now invaluable as a record of the student manners and morals of the sixteenth century.

Of a different character are the *Colloquies* of Schottenius, published in 1535.² Schottenius was a private school-master at Cologne, and his dialogues, though written in poor Latin, are more natural than the somewhat stilted phraseology of Mosellanus. The subject-matter also is different. Mosellanus treats of the poor student at his wits' end for food and lodging. The pupils of Schottenius are the sons of rich citizens of Cologne. They eat and drink, and talk about their food on all occasions, now and then lapsing into expressions of disgust at the spy who carries word to the master that they are not talking Latin, or at the flogging that they know will follow this breach of the rules.

The story of the *Colloquies* does not end here. Louvain supplies its *quotum* in the *Dialogues of Barland*.³ These were partly composed for a gentleman of position who wished to renew his acquaintance with the Latin language, but were doubtless used in schools as well. Not being written expressly for boys, they deal with scenes outside school life, and in their pages innkeepers, canons, and merchants figure more largely than pedagogues.

In short, with the exception of England, there is scarcely a country in Europe but made some addition to the library of scholastic conversation. Even in the newly-conquered Mexico, the *Colloquies* established themselves as an adjunct of polite learning. Francis Cervantes Salazar, Professor of Rhetoric in the University of Mexico, published an edition of Vives' *Exercitationes* in 1554, and added to them seven

¹ *Pædologia*. Preface; quoted by Massebieau, p. 83.

² 'Colloquia in oralia ex variis philosophorum dictis condita, per quæ stulta juventus sapere possit et eam prosequi prudentiam quam senibus contulit longævitæ' (Mass. p. 116).

³ 'Dialogi xli. per Hadrianum Barlandum, ad profligandam e scholis barbariem utilissimi. Coloniae apud Eucharium, anno 1530.' (Mass.)

dialogues of his own composition treating of Mexico and its institutions.¹

Though Colloquies in the strict sense were lacking, it must not be imagined that the English school-boy of the sixteenth century was without a convenient hand-book of phrases. The Vulgary of Stanbridge² gives a list of useful sentences, and these the scholars were doubtless made to learn by heart with a view to using them in their daily conversation:—

Good morowe.	Bonum tibi hujus diei sit pri- mordium.
I was set to schole when I was seven years olde.	Datus eram scholis cum sep- tennis eram.
What part singest thou?	Qua voce tu cantas?
It is evyll with us when the master apposeth us.	Male nobiscum est cum præ- ceptor examinat nos.

It is difficult to imagine a boy eulogising one of his “chums” with the remark, “He is born to drink well, both on the faders side and moders side”; but Stanbridge duly provides for the emergency—“Ex utraque parentum parte aptus ad bibendum nascitur.” Even for the sententious scholar proverbial expressions are given—

He is an evyl coke that cannot lycke his own lyppes.
Fatuus est coquus qui nescit lambere labra.

Of a more pretentious though less practical nature was the Vulgary of William Horman,³ headmaster of Eton. Horman cannot be congratulated on the selection of his phrases, which are arranged under thirty-seven heads. “Put not your trust in a bunglar of printer’s craft,” “Mancipem librariæ officinæ ne sequaris,” is not good material for the

¹ ‘Tres dialogos Latinos que Francisco Cervantes Salazar escribió è imprimió en México en dicho año. Los reimprime, con traducion Castellana y notas, Joaquim García Icazbalceta.’ Mexico, 1875. (Mass.)

² The copy in the British Museum is bound up with the ‘Accidentia ex Stanbrigiana editione, nuper recognita et castigata lima Roberti Whittingtoni Lichfeldensis. Wynkyn de Worde. 1528.’

³ ‘Vulgaria viri doctissimi Guil. Hormani Cæsariburgensis. Apud inclytam Londini urbem, 1519.’

daily conversation of a boy, and "Jacent hæc in caliganti vetustatis recessu" is but a clumsy translation of "These matters be out of my mynde."

The foregoing pages give the reader some notion of the books that a good school might have possessed in the century preceding the publication of the *Janua*, and no comment is necessary on the contrast that they bear to the best work of Comenius. Grammars are diffuse, complicated, and overburdened with unnecessary matter. Phrase-books are haphazard compilations often ill-suited to the end in view. In every case exclusive attention is paid to form; any actual information about the world in which he lives the scholar may pick up for himself. If he satisfies the spirit of pedantry by mastering the seven genders he is not prevented from using his powers of observation as much as he pleases; but he is not encouraged or helped to do so. The Colloquies, it is true, conveyed some definite information, but they were primarily intended as phrase-books, and between them and the systematised exposition of nature in the *Janua* a very great gulf is fixed.

We shall now give a slight sketch, and it must necessarily be a very slight one, of the essays towards the creation and organisation of schools that form the historical background to the life efforts of Comenius. Ours will not be the received method of the comprehensive history of education. Of Rabelais, of Montaigne, of Erasmus, of Vives we shall make no mention. Like Ascham and Locke they dealt with the training of the "young gentleman," and stand in no relation to schemes for the education of the people. For the same reason we shall pass over the great teaching corporation of the Jesuits. In many ways their methods of instruction have never been surpassed. For the organisation of boarding-schools a body of priests starts with a very great advantage, and if competent ought to solve with comparative ease the grave questions of discipline that always confront the directors of such institutions. The usher, who is at the same time an acolyte, gains a degree of dignity

to be obtained in no other way ; and in addition to this the priest-usher of one year develops with ease into the trained teacher of the next. But though we may grant the Jesuits these and other merits, we must yet recognise that their mansion stands far away from the high-road of true educational development. Leaving out of sight the one-sidedness of the training they supplied, we shall lay stress only on the fact that they excluded the people from any participation in it. Among the upper classes the supremacy of Mother Church was to be promoted by the teacher armed with the methods of the Jesuit school ; among the ranks of labour by the preacher, whose task was rendered easier by the prevalence of superstition and the limitation of knowledge. Very different was the ideal of Comenius. The day school open to children of every rank ; the large class managed by a single teacher as the only means by which such schools were economically possible ; the introduction of every subject of instruction that could free the understanding from sophistic habits and teach men to look facts squarely in the face—these were the goals towards which his efforts strove, and his historical antecedents are bound up with the great democratic movement of which the Reformation was the most striking manifestation, with the names of Luther, Sturm, Calvin, and Knox.

The conscience had been installed by the Reformers as guide, and its counsellor, the understanding, needed education. Good schools, and nothing else, could remove monkish ignorance from the land ; and this truth Luther was not slow to enunciate. In his stirring letter to the Magistrates of Germany,¹ he exhorts them to erect and maintain Christian schools. “ Is it not evident,” he cries, “ that it is now possible to educate a boy in three years so that when he is fifteen or eighteen years old he shall know more than the whole sum of knowledge of the high schools and monasteries up to this time? Hitherto, in the high schools, and monasteries, men have only learned to

¹ ‘An die Rathsherren aller Städte deutschen Landes, dasz sie christliche Schulen aufrichten und halten sollen,’ 1524.

be asses, blocks, and stones. They have studied for twenty and forty years and have learned neither Latin nor German.”¹

Schools must therefore be established for boys and girls, and these must be managed, not by the Church, but by the civil powers. As for the subjects taught, “Had I children,” says Luther, “I should make them learn not only languages and history, but also singing, music, and mathematics.” To the poor who objected that they needed the services of their children at home and could not afford to bring them up as gentlemen, he answers: “Let them go to school for one or two hours daily, and spend the rest of their time in learning a trade. These few hours they can easily spare; indeed, as it is, they waste far more time in playing at ball.” If parents refuse to send their children to school they must be made to do so; “I am of opinion that those in authority should ‘compel’ their subjects to send their children to school.”²

Luther did but formulate the charter of national education; its accomplishment he left to other hands, and it must be confessed that the schoolmasters of the Reformation carried out his recommendations in a very half-hearted way. In the then state of Europe, an approximation to the national school could scarcely have been expected, and we accordingly find that the leading reformed schools are of the “Grammar School” type, and intended for the middle class. Their programme of instruction is disappointing. A glance at the curriculum proposed by Sturm at Strasburg in 1539 will show that to read and speak Latin still remained the chief objects. It is not until a boy is sixteen and in the highest class that he commences such useful subjects as arithmetic, history, and geography.

¹ ‘An die Rathsherren aller Städte deutschen Landes, dasz sie christliche Schulen aufrichten und halten sollen,’ 1524.

² ‘Ein Sermon oder Predigt, dasz man solle Kinder zur Schule halten’—“Ich halt aber, dasz auch die Obrigkeit hie schuldig sei, die Unterthanen zu zwingen, ihre Kinder zur Schule zu halten.”

While according to Sturm the object of instruction is to instil learning and piety, it is evident that learning is of little use unless we can express it fitly. Therefore, in their early youth children should be taught to speak well.¹ Of the teachers no more is specified than that they should excel other men in learning and piety.² Some corporal punishment is necessary, but masters who take actual pleasure in flogging must be removed from their office.³ Not all boys should be sent to school, but only those who are naturally fitted for the study of letters. A certain number of poor children should be educated, but these must be of exceptional ability, and are to be excluded from the school at once if they give any trouble. In each town there should be one school. In large cities such as Paris more are naturally required; but if possible the educational needs of a town should be met by one Gymnasium of the liberal arts.

This Gymnasium should be divided into nine classes, in each of which the boy remains one year. In this manner, if he goes to school in his sixth year, he will be able to proceed to a university course of five years at the age of sixteen. The removes from one class to another shall take place in October, and shall be made the occasion for an imposing ceremony at which the magistrates, clergymen, parents of boys and their friends should be present, and when prizes should be given to the first two boys in each class.

Sturm then proceeds to give a detailed programme for each class, commencing with the ninth or lowest.

In this class reading and writing are taught. Care must be taken that the pupils learn to form their letters as neatly as possible, and particular attention must be given to reading aloud. Boys must be shown how to moderate

¹ 'De Literarum Ludis recte aperiendis Liber Joannis Sturmii, emendatus et auctus ab ipso Auctore. Argentorati, 1557' (1st ed. 1538),

p. 4.

² *Ibid.* p. 5.

³ Amovendi a literariis ludis sunt quicunque ex verberibus voluptatem capiunt.

their voices and how to speak distinctly. If any time is left after these points have been mastered a few of the easiest of Cicero's letters may be read.¹ In the eighth class the study of grammar is to be attacked; but no exceptions should be learned, and not more than two hours daily should be devoted to the elements. The rest of the day may be employed in reading Virgil's Eclogues and Cicero's Letters. In the seventh class the pupil may advance to grammar of a more advanced kind, and to syntax. One hour daily is enough for this. Another may be devoted to reading Cicero's *De Amicitia* and *De Senectute*. During the third hour the poets, such as Virgil, Catullus, Tibullus, and Horace, the latter only in selections, may be read. The fourth hour can be employed in exercises of style.

In these three classes the memory is the chief thing to be exercised. Neither boys nor masters should work less than four or more than five hours daily in school. The boy who now enters the sixth class is nine or ten years old and has mastered the rudiments of Latin. Cæsar's Commentaries, Plautus, Terence, and Sallust may be added to the authors already in hand. One hour daily to be given to style and composition.

In the next class Greek is commenced. After a few months' preliminary grammar Aesop's Fables and the Olynthiac Orations of Demosthenes may be attempted. The fourth class adds Homer to the list, and introduces the pupil to the study of rhetoric. In the third class dialectic may be commenced, and should be studied in Aristotle. Cicero's Topics and Livy are also recommended. In the second class the Dialogues of Plato and of Cicero may be read. The pupil has now got beyond the stage when he should spend time in learning rules. What he needs is practice.

The boy is now fifteen years old, and enters the first class. Here he reads Aristotle's *De Interpretatione*, and

¹ 'De Literarum Ludis recte aperiendis Libe Joannis Sturmii,' etc., p. 19.

should learn some arithmetic, geography, history, and the elements of astrology. In the classics he should continue to read Demosthenes, Homer, and Cicero.

Religious instruction is to be left for Saints' days and Church festivals. Before a boy leaves the school he should be well acquainted with the history of Christ and the Apostles, and with the most important events in the Old Testament. In the first class the Catechism, and in the first two the elements of Hebrew grammar should be taught. The afternoon of the last day in each week should be devoted to music, since this is an essential part of a liberal education.¹

Such was Sturm's scheme, the model for most of the post-Reformation schools on the continent. Humanist to the back-bone he yet sees the need of real studies, of mathematics, of history, of music. But it is not for these that the school exists. Latin, either written or spoken, is the dish served up for each form. The tardy recommendation of "modern subjects" for the first class, barely saves Sturm from falling into the category of "gerund-grinders."

Of equal celebrity with Sturm's establishment, though even less "modern," was the Latin school reorganised by Calvin at Geneva in 1559. Calvin took the Strasburg school as his model, and the differences to be found in the copy are typical of the man. Great stress is laid on discipline. The boys are to be conducted home from their classes by the masters of the four lowest forms.² Each lesson, no matter what the subject be, must commence with prayer,³ and at every turn we are confronted with the order to repeat "L'Oraison Dominicale, la Confession de Foy qu'on appelle le Symbole et puis les dix commandemens de la Loy." All the boys must learn how to sing,

¹ 'De Literarum Ludis recte aperiendis Liber Joannis Sturmii,' etc. ; pp. 20-34.

² 'L'Ordre des Escholes de Genève reveu et augmenté par ordon-nance de nos très honnorez Seigneurs, Syndiques, et Conseil, l'an 1576,' sec. 17.

³ *Ibid.* sec. 16.

and a master especially appointed for the purpose must teach them how to intone the Psalms.¹

In the general organisation of the institution, we find one remarkable piece of common-sense. The Principal (who is controlled by the Rector of the University) is not to be the stern and academic personage generally connected with the term "headmaster." "Que le principal, estant de moyen scavoir pour le moins, soit surtout d'un esprit debonnaire et non point de complexion rude ni apre; afin qu'il donne bon exemple aux enfants en toute sa vie, et aussi qu'il puisse porter tant plus doucement le travail de sa charge."² With its "debonnaire" headmaster and with Maturin Cordier, grown grey in the service of the young, to expound his *Colloquies* in person, the Genevan school must have been imbued with a genial spirit rare indeed in this age of pretentious grammarians and flogging pedagogues.

In the lowest of the eight classes, into which the school was divided, the boys learned their A B C. In the seventh, they read Latin and conjugate and decline "selon la formation qui en est dressée"; the sixth is chiefly devoted to Latin grammar, of a more advanced kind.

The fifth class brings the boys on to the rudiments of syntax and the *Bucolics* of Virgil. In the fourth, Cicero's letters and some Ovid may be read, but the special task is the elements of Greek. In the next class Greek grammar is continued, and the *Æneid* and Cæsar's *Commentaries* are read.

On reading that in the second class the pupils, who have only recently commenced Greek, are to study Xenophon, Polybius, Homer, and Hesiod, one is inclined to wonder if this scheme could ever have been actually enforced. At the same time dialectic, rhetoric, and syllogisms are commenced, and St. Luke's Gospel is read in Greek.

¹ 'L'Ordre des Escholes de Genève,' etc., sec. 18.

² *Ibid.* sec. 7.

The list of subjects for the first class comprises the Categories, the Topics, and the Elenchi, as well as Cicero and Demosthenes.

We have thus the programme of an eight-class school dealing with nothing but grammar and the classics, relieved by prayers and psalm-singing. Luther's mathematics and history have disappeared altogether.

In England the history of the Reformed Church is not bound up with educational progress to the same extent. Edward VI. linked his name with a number of Grammar Schools, but the Reformation destroyed as many schools as it sanctioned, and with the exception of the regulations for the Cathedral Schools drawn up by Cranmer in his *Reformatio legum Ecclesiasticarum*,¹ we meet with no very definite scheme for school organisation. Nor is the section in the *Reformatio*, "Of the schools to be attached to the Cathedrals," of very great value to the historian of Education. No division of classes is given, and the whole plan is sketchy in comparison with those of Sturm, Calvin, and Buchanan.

A school is to be attached to each Cathedral, that boys who have learned the rudiments from a private tutor may be able to obtain instruction in public classes.² These schools are primarily ecclesiastical in character, and exist "that the knowledge of God's word may be maintained in the Church; which is scarcely possible without a knowledge of languages."³

The master is to be chosen by the Bishop, and must be a sincere believer in the Evangelic doctrine, of good character, learned in grammar and humane letters, and sufficiently strong to stand the strain of teaching. The school shall be visited once a year by the Ordinary, who shall expel any boys on whom he thinks education is wasted, shall substitute good school-books for inefficient ones, if

¹ 'Reformatio Legum Ecclesiasticarum, ex autoritate primum Regis Henrici 8 inchoata; deinde per Regem Edovardum 6 proiecta adactaque in hunc modum, atque nunc ad pleniorum ipsarum reformationem in lucem edita auctore T. Cranmero.'

² *Ibid.* p. 110.

³ *Ibid.* p. 109.

necessary, and summon the master to appear before the dean if he has neglected his charge. As for the class-divisions and methods of teaching, these are left to the individual judgment of the master.¹ Special attention is to be paid to the Catechism, and at the beginning and end of the day the boys are to repeat the twelve articles of the faith, the Lord's Prayer, and the Ten Commandments. Boys are not to be admitted before they are eight, or after they are fourteen years old, and each, on admission, must be able to read English, repeat the Catechism in English, and write his own name. He must also possess an English New Testament.² For further information as to the functions of the master and management of the boys, we are referred to the "Statutes of the Cathedral, if any such exist"—a vague statement that does not add much to our knowledge.

That so little attention should be given to education in the *Reformatio* is the more remarkable, because in other respects very minute instructions for the subject under discussion are forthcoming. In the section on "Matrimony," for example, the writer even urges mothers to suckle their own children. It is only when he deals with schools that he leaves the organisation to the man in charge.

It must be confessed that the rules drawn up by Wolsey for his school at Ipswich,³ though prior to the Reformation, are better conceived, and present more points of interest.

To this establishment boys below a certain standard were not to be admitted. "If your chyld can red and wryte Latyn and Englyshe suffycyently, so that he be able to rede and wryte his owne lessons, then he shall be admitted into the schole for a scholer." An attendance rule is enforced. "If he be absent six dayes, and in that meane season ye shewe not cause reasonable (reasonable cause is only sekeness), then his rowme to be voyde without he be admytted agayne and pay 4d."

¹ *Reformatio Legum Ecclesiasticarum*, p. 111.

³ *Rudimenta Grammatices*.

² *Ibid.* p. 112.

“Also ye shall fynde hym ware in the winter.”

“Also ye shall fynde hym convenient bokes to his lernynge.”

The instructions to the masters embody a scheme for an eight-class school. In the lowest class especial attention is to be paid to articulation. In the second, *Æsop* and *Terence* may be read, and *Lily*'s gender rules learned; and so on with successive doses of classics throughout the remainder of the classes. Of special interest is the method indicated for reading one of *Terence*'s Comedies in the eighth or highest class. The teacher is to commence by prefacing a short account of the author's life, genius, and manner of writing. He should then proceed to explain the pleasure and profit to be derived from reading a Comedy, and to discourse on the signification and etymology of the word. Next he must give a summary of the story, and an exact description of the metre. Then he should construe in the natural order, and, finally, may indicate to his pupils the more remarkable elegances of style.

Throughout the general scheme no mention is made of arithmetic, though a small concession is made to the mother-tongue. “Sometimes you ought, in the English language, to throw out a slight groundwork for an essay; but let it be somewhat that is elegant.”

In Scotland, religious and educational reform went hand in hand, and the necessity for the establishment of the parish schools, that have existed in that country for three hundred years, was definitely formulated by John Knox. Knox, unlike Luther, wished the school to be dependent on the Church and not on the civil magistrate; but in his desire to put education within the reach of the very poorest, he is essentially at one with the German reformer, and endorses the principle of compulsion. “Of necessitie we judge it, that everie severall Churche have a schoolmaister appointed, suche a one as is able, at least, to teache Grammar and the Latine toun, yf the Toun be of any reputation. Yf it be Upaland, whaire the people convene

to doctrine but once in the weeke, then must either the reidar or the minister take cayre over the children and youth of the Parische, to instruct them in their first rudiments." "This must be carefully provideit, that no fader, of what estait or condition that ever he be, use his children at his awin fantasie, especiallie in thair youth-heade ; but all must be compelled to bring up their children in learnyng and virtue."¹ In addition to these elementary schools, a secondary school was to be established "in everie notable toun," while the three Universities of St. Andrews, Glasgow, and Aberdeen completed the system. To smaller details, such as subjects of instruction or class-divisions, Knox did not condescend ; but the deficiency is supplied by George Buchanan in his scheme for the "College of Humanite," to be attached to the University of St. Andrews. In this scheme,² written before 1567, Buchanan gives us a curriculum which is purely humanist and literary, and which was possibly modelled on Calvin's school at Geneva.

The school is divided into six classes, divided in turn into *decuriones*, each in charge of a *nomenclator*. In the lowest class the boys begin to read and write Latin through the medium of Terence. "In thys classe thay salbe constraint to speik Latin ; and dayly to compone sum smal thyng eftyr thair capacite."

In the fifth and fourth classes they shall read Terence, Cicero, and Ovid. The third class commences Greek grammar, and the study of prosody. It also attacks Linacre's Latin Grammar.

In the second and first classes Cicero's Rhetoric and Orations, as well as the works of Virgil, Horace, Ovid, and Homer, are read. The boys are to be exercised every month in verse, oration, and declamation.

At the end of the year, in August, a kind of examination,

¹ *Buke of Discipline.* Circ. 1560.

² 'Mr. George Buchanan's Opinion anent the Reformation of the Universitie of St. Andros.' (Vernacular writings of George Buchanan, edited by P. Hume Brown, 1891-92. Scottish Text Society.)

consisting of theme-writing and disputations, is to be held, and then the school breaks up for holidays. "Heir efter because the maist part of the country will be glaid to se thair bairnis and mak thayme clathys, and provid to thair necessiteis the rest of the yeir, thair may be given sum vacans on to the first day of October, on the quhilk day al lessonis begynnis againe in al collegis. At the quhilk day naine salbe promovit to na classe without he be examinat be the principal and regentis committit thairto."

Corporal punishment by inferior masters is forbidden. "Nor yit sal it be leful to the said pedagogis to ding thair desicles, but only to declair the fall to the principal or to thair regent, and refer the punition to thayme."

Of a large portion of this, his academic ancestry, Comenius was unaware, although, as has been shown, he did his best to assimilate and to build upon the efforts of previous workers. It remains to mention three of his contemporaries who exercised an undoubted influence upon him. These are Wolfgang Ratke, John Valentine Andreæ, and John Henry Alsted.

At first sight it would appear as if Ratke (1571-1635) were the chief inspirer and forerunner of the *Great Didactic*, but a little investigation tends to weaken this presumption. It has already been shown that Comenius, while putting his ideas into shape at Lissa, did not know with any exactness in what the method of Ratke consisted, and that the secrecy maintained by the latter hindered his contemporaries from knowing what were the actual suggestions that he had formulated. It was possibly the eulogy of his method by the Giessen professors Helwig and Jung that had reached Comenius at Herborn, and it is more than probable that no more detailed account ever came into his hands. True, he lays stress on the fact that Ratke's examples fired him, in the beginning, to attempt school-reformation, but he speaks with little appreciation of his system of teaching Latin; and, though he can scarcely have been ignorant of the general principles contained in them, does

not appear to have been intimately acquainted with his works.¹

Far more immediate was the influence of Andreæ, to whose *Utopia*, *Reipublicæ Christiano-Politicæ Descriptio*, and the educational reforms described in it, Comenius's debt is very great. Andreæ, imbued with the scientific spirit that was awakening throughout Europe, wished to add both mathematics and natural science to the ordinary humanist curriculum, and was undoubtedly a strong factor in the development of Comenius's "modern side" tendencies.

But it is to John Henry Alsted, his friend and teacher at Herborn, that the debt is greatest. In his *Encyclopædia of all the Sciences*, published in 1630, Alsted included a very complete treatise on Education, and, though many of the propositions brought forward resemble those of Ratke, it does not appear that they were directly borrowed from him. Indeed, in the list of writers on Education at the beginning of Alsted's *Consilarius Academicus*, Ratke's name does not

¹ The great similarity between the method of Ratke and of Comenius is well exemplified by the programme submitted by Ratke to a commission at Jena in 1629. 1. Everything is to be preceded by prayer. 2. Everything according to the method of nature. 3. Not more than one thing at a time. 4. And that frequently. 5. Everything first in the vernacular. 6. From the vernacular into other languages. 7. Everything without compulsion. 8. All subjects should be taught on principles that are similar and harmonious. 9. All effort should be on the side of the teacher. 10. The pupil should maintain a Pythagorean silence, and should not ask questions or talk while the lesson is proceeding. 11. Each language should be taught in accordance with its own genius. 12. The pupil should approach everything with an unbiased mind. 13. Not more than one teacher in one subject. 14. Form should not precede matter. 15. Education should begin with religion. 16. All the young should be educated. 17. All certainty should be obtained through induction and experiment. 18. Nothing but the subject actually before the class should be discussed. 19. All subjects should be taught in two ways, first superficially, then in detail. 20. The teacher should do nothing but teach. Discipline must be left to the ushers. 21. All the pupils should sit in a row, in view of the teacher. 22. A pupil must miss no school hour. 23. At home a boy should be subjected to the same discipline as at school. 24. In printing school-books the importance of local memory should be borne in mind. 25. Languages should be taught with a view to conversation. 26. Nothing that can give rise to any evil thought is to be placed before the pupil (*Geschichte der Pädagogik*, Prof. Th. Ziegler, p. 149).

appear. Helwig's *Didactica*, however, is mentioned, and it was doubtless through this work that Alsted was brought into contact with the educational scheme that was causing so much stir at Giessen. A few quotations from his maxims will suffice to show how great must have been the influence of this thinker, an influence that was personal as well as intellectual, as he made a point of maintaining the closest intercourse with his pupils.

1. Not more than one thing should be taught at a time.
2. Not more than one book should be used on one subject, and not more than one subject should be taught on one day.
3. Everything should be taught through the medium of what is more familiar.
4. All superfluity should be avoided.
5. All study should be mapped out in fixed periods.
6. All rules should be as short as possible.
7. Everything should be taught without severity, though discipline must be maintained.
8. Corporal punishment should be reserved for moral offences, and never inflicted for lack of industry.
9. Authority should not be allowed to prejudice the mind against the facts gleaned from experience; nor should custom or preconceived opinion prevail.
10. The constructions of a new language should first be explained in the vernacular.
11. No language should be taught by means of grammar.
12. Grammatical terms should be the same in all languages.¹

In restricting the use of the vernacular school to girls, and to boys destined for manual labour,² Alsted was less thorough than his disciple; but in duly valuing the personal influence of the individual teacher, he shows, on this point at least, the sounder judgment. "The teacher," he says,³ "should be a skilled reader of character, that he may be

¹ *Encyclopædia Scientiarum Omnium*, ii. 287.

² *Ibid.* ii. 281.

³ *Ibid.* ii. 273.

able to classify the dispositions of his pupils. . . . Unless he pays great attention to differences of disposition he will but waste all the effort that he expends in teaching." This is the one point of which Comenius sometimes appears to lose sight. He relies too much on the class-book and too little on the class-master. The class becomes a machine, flawless it is true, but lacking spontaneity—the spontaneity that a teacher can only supply if left free to employ his trained faculties according to the dictates of a trained judgment.

The foregoing sketch, brief though it is, will suffice to show in outline the position in which Comenius found the problem of education. His contribution to the material of the school-room we have already discussed in treating of his *Janua Linguarum*, his grammars, his dictionaries, and his other class-books; while the philosophical principles on which his educational precepts are based will be found in the *Great Didactic*. It remains to give, as a pendant to the school programmes of Sturm and Calvin, the scheme, only half carried out, that he drew up for the Pansophic school at Saros-Patak; a scheme which is none the less interesting because it differs in certain details of classification from that contained in the *Great Didactic*.

The most cursory glance at the Patak scheme will suffice to show that Comenius is more than two centuries ahead of his immediate predecessors. His programme is essentially modern, and, even at the present day, is extremely suggestive for those engaged in the practical work of school organisation.

The *Outline of the Pansophic School*¹ is divided into two parts. The first prescribes general rules, while the second takes the classes one by one and gives a detailed description of each.

To a large extent Part I. does but reiterate the general positions with which the reader is already familiar. The scheme of instruction is to be universal, and as much

¹ 'Scholæ Pansophicæ Delineatio, *Op. Did. Omn.* iii. 10.

attention is to be paid to the formation of character as to the instilling of knowledge. Boys are to be urged to read for themselves out of school-hours, and among the books suggested for private study are the Dialogues of Erasmus and of Vives, since these are easy and require little explanation.

Great care must be taken not to overstrain the minds of the pupils. After each hour's work they are to be allowed half an hour's play, and after dinner and supper should rest for an hour at least. At night eight hours, from eight in the evening till four in the morning, must be set aside for sleep, and twice in the week, on Wednesday and on Sunday, a half-holiday is to be given. At Christmas, Easter, and Whitsuntide the boys may have a fortnight's holiday, and in the Autumn a full month.

Comenius begs the reader not to consider this an excessive allowance of holidays. There still remain forty-two weeks with thirty school-hours in each. This makes a total of 1260 hours, and by employing these rationally an immense amount of knowledge may be acquired in seven years. The general sketch concludes with a time-table to be employed throughout the whole school.

Morning

- (i) 6-7. Hymns, Bible-reading, and prayers.
- (ii) 7.30-8.30. The principal subject of the class, theoretically treated.
- (iii) 9-10. The same, treated practically.

Afternoon

- (i) 1-2. Music, or some other pleasant mathematical exercise.
- (ii) 2.30-3.30. History.
- (iii) 4-5. Exercises of style.

In Part II. we find a detailed account of the seven classes.

Class I.—*The Vestibular*

1. Over the door is placed the inscription :

“Let no one enter who cannot read.”

2. The walls of the class-room are to appeal to the senses of the pupils, and should be covered with diagrams, illustrating the subjects taught in the class. These diagrams are to represent : (1) The Latin alphabet, in small and in capital letters. (2 and 3) Types of the declensions and conjugations. The beginner is to be allowed to look at these while repeating his grammar lesson, until he knows them so well that it is less trouble to repeat from memory than to tire his eyes by looking at the wall. (4) Short maxims containing the most important rules of conduct, which will thus be impressed on the memory of the class.

3. The religious exercises consist of the heads of the Catechism, together with a few short hymns and prayers.

4. The class-book is to be the *Vestibulum*, containing the chief matters on which the constitution of the universe hinges, the roots of the words on which language is dependent, the fundamental principles of intelligence, and a course of Moral Philosophy suited to children.

5. In mathematics the boys learn the elements of arithmetic; but no geometry, except the difference between a point and a line. In music they may learn the scale and the keys.

6. No special history-book is provided for this class. The *Vestibulum* is sufficient.

7. Exercises in style will here consist in the explanation of words, in translation and re-translation, and, near the end of the course, in joining the words together into sentences.

8. The only accessory studies are good hand-writing and drawing.

9. Those games to be allowed that are suitable to the boys' age and nationality.
10. In place of a dramatic performance at the end of a term there is to be an examination, in which each boy is to challenge another, and to ask and answer questions on the subject-matter of the *Vestibulum*.

Class II.—*The Janual*

1. Over the door is the inscription :

“ Let no one enter who is ignorant of mathematics,”

that is to say, the elements are supposed to be known.

2. On the walls are to be pictures of the more important objects mentioned in the *Janua* (if the things themselves cannot be procured). On one wall may be drawn those that are natural, on another those that are artificial. On the other two walls grammatical rules may be written.

3. The Catechism is to be thoroughly learned.

4. The class-books are the *Janua*, the Latin Vernacular dictionary, and the *Janual* grammar.

5. In arithmetic, addition and subtraction are to be taught; in geometry, plane figures. The music is to be rather more advanced than in the *Vestibular* class.

6. In history no book other than the *Janua* is to be used.

7. Exercises of style will deal with the structure of phrases, sentences, and periods.

8. No accessory study is prescribed for the boys in this class, as they have already enough to do. It will be sufficient if they learn with exactness the names and natures of external objects.

9. Games to be chosen by the master.

10. In place of a dramatic performance, the boys may ask one another hard questions on the subject-matter of the *Janua*.

Class III.—*The Atrial*

1. Over the door is to be written :

“Let no one enter who cannot speak.”

2. The walls are to be covered with ingenious diagrams, and with select maxims relative to the adornment of speech.

3. In this class the boys should begin to read the Bible ; but not as it stands. An abridged form, suited to their intelligence, should be given to them, and a portion of this must be expounded daily.

4. The class-books are the *Atrium* of the Latin language, the *Grammar of Elegance*, and the Latin-Latin dictionary, especially written for the *Atrium*.

5. In arithmetic the boys may learn multiplication, division, and the table of Cebes. In geometry, solid figures. In music, harmony. The rudiments of Latin verse may be taught, together with selections from Cato, Ovid, and Tibullus.

6. The history for this class is the famous deeds of the Biblical narrative.

7. Exercises of style consist in making paraphrases and in transposing sentences. No boy may attempt to write verse until he has been in the class eleven months.

8. It will be sufficient accessory study if the boys read attentively and imitate what they read. They should be able to read any Latin author, and to talk Latin fluently by the time they leave this class.

9. Recreation to be taken at fixed hours.

10. For dramatic purposes the *Schola Ludus* is provided.

Class IV.—*The Philosophical*

1. Over the door is to be written :

“Let no one ignorant of history enter here.”

2. The walls should be adorned with pictures illustra-

tive of arithmetic, geometry, and statics. Adjoining the class-room there should be a dissecting-room and a chemical laboratory.

3. A special collection of hymns and psalms must be arranged for this class; also an epitome of the New Testament, which should comprise a continuous life of Christ and his Apostles compiled from the four Gospels.

4. The class-book is to be the *Palace of Wisdom*, in which natural phenomena should be described in such a manner as to show how they came into existence.

5. In mathematics the rules of proportion should be learned, and trigonometry and the elements of statics may be commenced. The pupils should now learn instrumental music.

6. The history for this class should be natural history, and may be learned from Pliny and *Ælian*.

7. Exercises of style may be discontinued, and the time thus gained devoted to the study of Greek.

8. The accessory study is Greek. This is a difficult subject, but need not cause the pupil much alarm for three reasons: (a) No learned man is expected to have an exhaustive knowledge of Greek. (b) It is comparatively easy to learn enough to read the New Testament, and this is the chief utility of the study. (c) Difficulties must be surmounted by a good method, so that in one year, by employing the last hour on four afternoons in the week, the intricacies of the language may be overcome. In addition to the New Testament, suitable selections from Greek authors may be read.

9. In this class serious matters and not games claim the attention of the pupils; but fitting recreation must not be neglected.

10. For dramatic performances, plays that deal with philosophy and philosophers may be acted.

Class V.—*The Logical*

1. Over the door is the inscription :

“Let no one enter who is ignorant of natural philosophy.”

2. The walls are to be covered with the rules of logic and ingenious devices of a similar nature.

3. Religious instruction comprises hymns, psalms, and prayers. A Bible manual also, called the *Gate of the Sanctuary*, is to be placed in the pupils' hands. This is to contain the whole of Scripture history in the words of the Bible, but so digested that it may be read in one year.

4. The class-book is a work dealing with the human mind, and consisting of three parts, which are respectively : (a) Pansophic, treating of the things that have been discovered and that should be discovered by man. (b) A formal logic, in which the whole process of reasoning should be explained, and a description given of the analytic, synthetic, and syncritic methods. (c) A repertory of all the problems that can be suggested by the mind.

5. For the afternoon the following studies are advised :

In arithmetic, the rules of partnership, alligation, and position.¹

In geometry, mensuration of heights, distances, and plane surfaces.

In geography and astronomy, the general description of the earth and the heavens.

In optics, the most important facts.

6. The history studied should be that of mechanical inventions.

7. With a view to style, historians like Cornelius Nepos, Curtius, Cæsar, and Justin may be read.

8. As an accessory study, attention may be devoted to Greek. Isocrates and Plutarch are recommended

¹ ‘Regulæ Societatum, Alligationis, Falsi.’

9. By way of recreation the pupils are advised to ask one another hard questions.

10. A dramatic performance, illustrating the contest between grammar, logic, and metaphysic, and their final reconciliation, may complete the year's work.

Class VI.—*The Political*

1. Over the door is the inscription :

“Let no one enter who cannot reason.”

2. The pictures on the wall should illustrate the necessity of order and limitation. With this in view, the human body may be represented in four ways: (a) Lacking certain limbs. (b) Supplied with superfluous limbs. (c) With its limbs wrongly put together. (d) A perfect body, properly constructed and shapely.

3. In theology the whole Bible is to be read.

4. The class-book is to be a work dealing with human society and the laws of economics.

5. In arithmetic *Logistic*, and in geometry *Architectonic* may be learned. Special attention should be given to geography and to that part of astronomy that deals with the theory of the planets and the laws of eclipses.

6. The history should be that of ritual.

7. For the sake of style Sallust, Cicero, Virgil, and Horace may be read.

Compositions in verse are not to be insisted upon. They are extremely difficult, aptitude for them is rare, and the time devoted to them might be more profitably employed on other things. But if a boy shows very great aptitude for verse-writing, he is not to be dissuaded from it.

8. As an accessory study, Thucydides or Hesiod may be read.

9. Suitable recreations may be chosen according to inclination. They should not be dangerous or excessive.

10. A dramatic performance may be given representing the degeneration of Solomon and his moral downfall.

Class VII.—*The Theological*1. **Inscription over the door :**

“ Let no one enter who is irreligious.”

2. The walls should be covered with mystic symbols illustrating the wisdom hidden in the Scriptures. On one wall diagrams of Hebrew grammar may be placed.

3. The most devotional psalms and hymns of the Church may be used, as well as prayers of a special nature taken from the Scriptures and from the works of the most inspired theologians and of the sainted martyrs. In addition a compendium of Christian beliefs, duties, and hopes, written in the phraseology of the Bible, should be read daily.

4. The class-book should be a work dealing with the last stage of wisdom on earth, that is to say, the communion of souls with God, and should consist of three parts :

(a) *The ascent of the mind to God.* In this a survey should be made of the universe, preserving the order of the *Janua*, and with regard to each fact should be pointed out what God tells us about it in the Scriptures, and how the heaven and the earth and all that in them is tell the glory of God.

(b) The formal part should consist of a key to God's Book ; that is to say, practical rules for reading the Scriptures with profit and for duly considering the works of God. Here a three-fold commentary should be supplied : (1) from Scripture itself ; (2) from reason ; (3) from sense-experience.

(c) The third part should be a *Repertory of Theology*, giving a detailed account of the mysteries of Salvation.

5. In arithmetic the sacred and mystic numbers that occur in the Scriptures should be studied ; also sacred architecture, as exemplified by Noah's ark, the Tabernacle, and the Temple.

6. Universal history should be studied, and in particular the history of the Church, for whose sake the world exists.

7. In this class some training should be given in oratory. The future minister must learn how to address a congregation, and should be taught the laws of sacred oratory. The future politician must be taught how to appeal to the reason of his hearers.

8. The accessory study is Hebrew, which must be studied in such a way that before the end of the year the pupil shall be able to read and understand the original text of the Scriptures.

9. Recreation is to be allowed, but must not interfere with the theological studies.

10. Religious plays dealing with the character of, say Abraham or David, may be acted.

Thus ends the detailed description of the Pansophic school. A few general remarks follow. Each class is to have its own master, and in addition there is to be a headmaster, whose duty it will be to enter each class daily, superintend the school, and take the place of any master who may be kept away by illness. The headmaster must be well paid, as indeed should the class-masters, since this is the only way to make them contented with their positions and prevent them from seeking more remunerative work in some other profession.

Comenius then pertinently asks, "Where is the money to come from?" It is not his business, he replies, to answer this question, but he suggests that citizens should give a fixed proportion of their incomes for educational, as they already do for charitable purposes, and that it is the duty of princes and of wealthy citizens to assist schools in every way.

Comenius's chief title to fame as an educationist rests on the discovery, application, and embodiment in a large-minded treatise on Didactic, of the fundamental principles :

- I. That all instruction must be carefully graded.
- II. That in imparting knowledge to children the teacher must, to the utmost, appeal to the faculties of sense-perception.

The first proposition, like so many principles with which we have become familiar in practice, may seem curiously obvious, but if the reader wishes to realise with any force to what extent the gradation and proper articulation of studies was neglected, or rather unthought of, when Comenius was writing, let him read a few chapters in the *Great Didactic* and then turn to Milton's tractate *Of Education*. In the one he will find a rigorous distribution of the subject-matter of instruction, based on an analysis of the capacity and age of the scholar and on a common-sense estimate of the difficulty of the subject. In the other he meets with breadth of mind, it is true, but with no scheme of gradation whatever. Subjects and authors are dumped down in a heap and are declared suitable for educational purposes, but no effort is made to sort them.

Now to construct a solid pile of subjects of instruction that are really suitable instruments with which to educate the young is no easy task ; but a greater difficulty arises when we try to pull the large heap to pieces, and to arrange it in nine or ten smaller heaps, carefully graduated as regards quantity and quality. Both these tasks Comenius undertook and performed ; the first with as great success as could possibly be expected, if we consider how ill the several branches of knowledge were then defined, and the second in a manner which, even at the present day, can excite nothing but admiration.

By Comenius the principle of gradation is carried into every department of school management, the result being a careful grading of schools, of boys, and of books. The twenty-four years to be devoted to education are divided into four periods of six years, and to each of these a school

is assigned. The first of these, the Mother School, was a totally new conception, and emphasises the necessity of commencing education from the moment the child leaves the cradle. The next stage, the Vernacular School, lays the foundation of all that is to follow, with the exception of Latin, and grounds the boy thoroughly in one or two modern languages. The next stage, the Latin School, introduces the boy to the classics, continues the modern subjects commenced in the Vernacular School, and corresponds to a present-day secondary school with a good modern side. Finally the University gives the scholar the opportunity of thoroughly mastering any one of the branches of knowledge that he has already learned superficially and in outline.

In the Vernacular and in the Latin School the proper gradation and classification of the boys is attained by a division into six classes, in each of which the scholars must remain one year, and which they must not leave until their fitness to proceed to the next class has been tested by an examination. Throughout the twelve classes of these two schools a properly graded series of school-books is supplied, all, from the lowest to the highest, treating of the same subjects, namely, the entire world of phenomena, and leading the scholar from the rudimentary facts and bare nomenclature acquired in the Mother School to the detailed exposition of them in Latin that awaits him in the higher classes of the Latin School.

But it may be asked, Does Comenius supply a graded method? Is there any essential difference in his manner of presenting knowledge to his most elementary and to his most advanced pupils?

While it is evident that his graded classes and graded books ensured that the beginner should have the subject-matter of his studies presented to him more simply and with less complications than to the advanced pupil, it must be confessed that the same method seems intended to run through all the classes, from the lowest to the highest. Of this method the basis is the presentation of

information to the senses first, and then, but not till then, to the understanding. Appeal, that is to say, is to be made to the sight and to the touch, and models or pictures of everything that has to be learned should be given to the pupil.

To Comenius's eternal credit be it that he was the first to realise that the object-lesson was the only way in which any impression could be made on the half-developed thinking powers of the child, that he practically anticipated Pestalozzi, and paved the way for Froebel. Unfortunately he stops here. Up to the highest classes of the Pansophic school, the pictures on the wall and the models in front of the pupils are the prime aids to the teacher in his task of instilling knowledge. Visualisation in all things is the watchword of the Comenian method.

Now while it is evident that this factor is of great value at every stage of education, it is also evident that, at a certain stage, it becomes of secondary importance. By means of pictures, models, and what-not, a boy's progress in acquiring the nomenclature of, let us say a language, may be immensely facilitated; but, when he reaches a certain point, when he is beginning to grapple with syntax, with analysis, with the various modal forms, or, in algebra, when he is attacking the mysteries of quadratic equations, a completely new element is introduced. Visualisation and object-lessons barely touch the fringe of the teacher's difficulties. At the stage of adolescence, when the boy is learning, not only to see and hear, but to think and draw conclusions as well, the schoolmaster needs all the assistance that can be derived from psychology, from educational analysis and from the statistics of patient experimentation in teaching. For Comenius none of these sources were available, and to prove his points he is obliged to have recourse to weak analogies from Nature. In consequence, while his educational analysis shows immense insight, his proofs are singularly unconvincing and lack the scientific character that can be given to reasoning on matters of education by the deductive application of principles

derived from mental science or by the inductive use of statistics. In some respects, however, his lack of psychology is an advantage. Schoolmasters are busy people and are apt to resent the presence in works on education of terms which appear to them unnecessarily technical or of reasoning that goes beyond the rough accuracy that is needed for practice. When reading Comenius, they will feel that they are in contact, not with a psychologist in his study, but with a schoolmaster in his class-room. He is, indeed, one of the very small band of teachers who have written as well as taught. Most of the great schoolmasters, like Vittorino da Feltre in Italy and Arnold in England, have left behind them a tradition rather than a reasoned exposition of their educational principles; while the writers on the subject, Ascham, Locke, Herbart, and their fellows, as private tutors were unversed in the difficulties and the problems presented by class-teaching and by school-life. As a source of inspiration Comenius is hard to beat. He displays the single-minded enthusiasm of Pestalozzi, while he spares us the lack of sequence in ideas, the absence of classification and the confused and inarticulate style that must have made many teachers who wish to see "what theories of education are like" and into whose hands a copy of *How Gertrude Teaches her Children* finds its way, put the book down in irritation and despair. The man who can compare the feelings of a teacher in front of a large class with those of a miner whose hands "tremble with excitement when he discovers a rich vein of ore,"¹ will not fail to awaken an echo in the hearts of those teachers of our own day who devote their whole lives to the welfare of their pupils.

Comenius is seldom wanting in insight even when he is most illogical and unscientific; he seldom fails to interest even when most prolix. There are few problems in education that are not touched upon and discussed by him, and teachers, especially those whose habit of mind leads them to action rather than to the analysis of mental

¹ *Great Didactic*, ch. xix.

phenomena, will not fail to derive stimulus from a perusal of the answers that this great schoolmaster, with his almost complete lack of the apparatus for attack possessed by the modern educationist, gave to the questions that are still being asked at the present day.

INTRODUCTION

III

CRITICAL

IN the foregoing pages the attempt has been made to present Comenius from the standpoint of his own age and of the educational problems which it presented. The aim of this section will be to consider his work in the light of modern views, and to estimate its value for the student of educational theory.

If the modern educator approaches the history of education with the object of obtaining guidance for his daily practice or support for his growing convictions he is sure to be disappointed. Much that he reads will strike him as commonplace, much as absurd; for what was sound in the practice and theory of the past has been incorporated in the work and thought of the best modern teachers, while the residue appears meagre and fantastic. In the work of all great writers or teachers there is, it is true, much that is good for all time. To the teacher of to-day Comenius, as a marked personality struggling with class-room management, is a sympathetic colleague; as a headmaster trying to get work on new lines out of a stupid and rebellious staff, he cannot fail to arouse interest in the minds of those engaged on the same thankless task; but to the student of education his interest is mainly historical since he represents a stage in the slow process by which our present edifice of educational theory has been

built up, and a contrast between his views and those of the present day will bring into relief the great advance that has been made of recent years by even such a backward study as educational science.

Our inquiry may take place under four heads: I. the method of attack and the mode of proof; II. the delimiting of aims; III. knowledge of the subject-matter; IV. the instruments by which it is to be manipulated.

In the case of an applied science of maturer standing, such as medicine, there is no difficulty in stating each of these with brevity. (1) The method is partly inductive, depending upon clinical experience and on direct experiments with drugs, and partly deductive in that it consists of the application of the results reached by a number of other sciences such as physiology and chemistry. (2) The aim is the restoring of the body to health and the prevention of disease. (3) The subject-matter to be known is the human body in health and disease. (4) The instruments are drugs, hygienic measures and methods of suggestion.

In the case of education the factors are more complex, but a similar analysis can be made.

I. Until quite recently the method applied to educational problems has been largely that of uncontrolled experience resulting at best in a few positions deemed to be established by "common-sense," but unable to lay claim to any proved validity, since the common-sense of one educator does not always agree with that of another. Of late years the application of the experimental and statistical method to psychology has shown the way, and educational experiment has come into existence. It is difficult to make a selection from the mass of work that has already been produced, but the following instances will suffice for illustrative purposes:—

For years educators have laid stress upon the necessity of cultivating the memory, or have stated with confidence that it could not be trained, giving no proof of their assertions. Recently the matter has been made the subject

of direct experiment, and the *dicta* of common-sense have been in part modified, in part disproved. The work of Prof. Meumann in particular has established beyond a doubt that there are certain modes of learning by heart that are more efficacious than others, and that there is a certain transfer of practice from one subject to another.¹ The results of these experiments will no doubt be modified by future research, but they are at any rate objective; the exact methods adopted are recorded and the results attained are there in black and white for refutation or confirmation. Closely connected with memory is the consideration of the most efficacious method of arranging a two-period weekly subject in the time-table, and here it has been shown experimentally that the plan generally adopted of separating the periods by as many days as possible is a mistake, and that they ought to be separated by one day only, while these results have been strengthened by a deductive application of results reached by Prof. Ebbinghaus² in his experiments on memory. By applying formulæ of correlation an element of quantitative exactness that twenty years ago would have been considered impossible has been introduced into the manipulation of educational statistics. This is strikingly illustrated by Mr. Burt in his excellent monograph on *Experimental Tests of General Intelligence*.³ In connection with fatigue, also, much useful experimental work has been done. The reader may in particular be referred to Mr. Winch's proof that the work done in evening schools is largely vitiated by the lack of freshness on the part of the students.⁴ Finally, certain instinctive tendencies lend

¹ Meumann, *Über Ökonomie und Technik des Gedächtnisses*, Leipzig, 1908. Cf. also Winch, 'The Transfer of Improvement in Memory in School Children,' *British Journal of Psychology*, vol. ii. p. 284.

² R. Tschudi, Basel, *Zeitschrift für experimentelle Pädagogik*, vol. iii. p. 55.

³ C. Burt, *British Journal of Psychology*, vol. iii. pp. 94-177.

⁴ W. H. Winch, 'Some Measurements of Fatigue in Adolescent Pupils in Evening Schools,' *Journal of Educational Psychology*, vol. i. pp. 13 and 83.

themselves to quantitative observation. Educators have at all times been aware that the collecting instinct was a strong one both in boys and girls. Recently, by the questionnaire method it has been shown (with the degree of certainty which this method affords) that the instinct develops gradually, reaching a maximum at the age of ten, that it manifests itself in connection with certain subjects more than others, and that, as a rule, it is most unscientific in its working, although undoubtedly supplying a basis upon which scientific habits of classification can be established.¹

On the deductive and analytical side the progress made by educational theory has been equally great, thanks to the advance made in psychology. If such a subject as "attention" is in question, there is at the disposal of the educationist an analysis of the process which throws considerable light on the manner of furthering it. The practical educationist with no analysis to fall back on will urge the beginner to insist on attention, and will warn him that it is waste of time to teach a class that is not attending, or attending to something else. Further than this he cannot go.

The analyst is in a better position. He can point out the conditions on which attention depends, can show that it is primarily "conative" and must be based on a constant attitude of expectation leading to demand, and that this attitude can be produced by certain methods and devices. The attention of a given class, for instance, may depend (1) on the personality of the teacher and the details of his class-room method; (2) on the manner in which his lesson works up to a definite point; (3) on the manner in which his lessons develop one from the other and as a course lead up to a distinct end; (4) on the extent to which one subject of instruction works in with and evidently prepares the way for another, thus giving rise in the mind of the pupil to the conviction that it is worth while to attend and

¹ C. F. Burk, 'The Collecting Interest' in Stanley Hall's *Aspects of Child Life and Education*, p. 205.

to work, because the elements to be mastered form part of a well-ordered scheme. Under each of those headings there is much to be said, and the process is a deductive application of psychological analysis to educational problems under the guidance of the educational insight derived from experience.

Neither on the inductive nor on the deductive side was Comenius in a position to attack his subject in the scientific manner here indicated. It would not be accurate to say that the publication of the *Novum Organum* had not affected him; yet it is certain that he did not understand it, and naturally he had no conception that it might be possible to investigate sociological matters by the statistical method, or that the experimental method might be applied to problems of mind. Nevertheless he felt instinctively, and herein lies his greatness, that the *obiter dicta* of an experienced and gifted schoolmaster need some further reference to give them validity. From a combination of a wish to follow nature on Baconian lines and his ignorance of what "to follow nature" means, was produced his method of the imitation of natural processes by the educator. He wishes, for example, to prove the proposition (as to the validity of which no opinion is here expressed) that we should, in education *proceed from the general to the particular* (ch. xvii. 2. ii.). A modern would first consider with care what, both logically and psychologically, this process consists of, and would then ask in what cases it is a desirable one. Comenius proceeds as follows :

(1) He states dogmatically the principle of nature which is to be imitated.

Nature develops everything from beginnings which, though insignificant in appearance, possess great potential strength.

The matter out of which a bird is to be formed consists of a few drops in a shell which contain the whole bird potentially.

(2) He gives an imitation of this process in the arts, or as in this case, another illustration from nature.

A tree is potentially contained in the kernel of its fruit.

(3) *Deviation of Schools.* Teachers place in the earth plants instead of seeds, and trees instead of shoots.

(4) *Rectification.*

- i. Every art must be contained in the shortest rules.
- ii. Each rule must be expressed in the clearest words.
- iii. Each rule must be accompanied by examples.

Here it is of course evident that he is not quite clear in his own mind what he means by the word "general," and the connection between the principle with which he starts and the rectification with which he ends is meagre; but still the attempt is made to give some theoretical basis to what would otherwise be three isolated aphorisms.

Consider the proposition immediately following the one just treated. In Education we must proceed

from what is easy to what is more difficult (ch. xvii. 2. iv.).

Again the process is :

(1) A dogmatic statement.

Nature advances from what is easy to what is more difficult.

In the formation of an egg not the hardest part, the shell, but the contents are first produced.

(2) *Imitation.* A carpenter learns first to fell trees, then to saw them into planks and fasten them together, and lastly to build houses with them.

(3) *Deviation.* It is therefore wrong to teach the known through the unknown, *e.g.*, to teach boys who are beginning Latin the rules in Latin.

(4) *Rectification.* All explanations must be given in the language which the pupils understand.

Laugh as we may at the quaintness of the method and the insufficiency of the proof, there is here contained the first germs of a scientific method in educational theory, the

assumption that a proof is necessary and that isolated statements of procedure are lacking in cogency. To have made this beginning is worthy of all praise, and Comenius's contribution does not end here. A preliminary of all scientific investigation is a logical analysis of the subject-matter and an isolation of the points to be investigated. In this respect many of the classics of educational theory are great defaulters, rambling compendia, musings at large with little or no system. In Comenius's work each point is discussed in a separate chapter, and the headings of these chapters are those that might be selected by a modern writer.

If a man is to be produced, it is necessary that he be formed by education (ch. vi.). A man can most easily be formed in early youth, and cannot be formed properly except at this age (ch. vii.). The young must be educated in common, and for this schools are necessary (ch. vii.). All the young of both sexes should be sent to school (ch. ix.).

All these indicate an attempt to split up and to isolate the elements in a complex subject-matter, and this must be looked upon as a distinct contribution, in spite of the crude manner in which each element is treated when isolated.

II. In his statement of the aims of education Comenius is weaker than in his exposition of method, and in this respect the modern educator resembles him. Comenius is weak in that he does not see the difficulties, the modern is weak in that he is overwhelmed by them. We have only just got past the stage of formulating as our end the Formation of Character, or the Harmonious Development of the Faculties, or the Forging of Men, statements which mean very little even with a liberal use of capital letters. We are only just beginning to recognise that statements of this kind must be reserved for the sole use of distinguished clerics, headmasters, and princes of industry at school prize-givings, and that the serious organiser of education must go further into detail. The end is complex, and to realise this complexity is an advance. Both the individual and the state

have claims, the individual to be developed for his own sake and the state to dictate restrictions¹; the individual needs cultivation on the logical, ethical, and æsthetic sides, and here competing claims have to be balanced; the need of earning a livelihood indicates a utilitarian aim that cannot be disregarded; the training to a sense of duty would by many be regarded as essential, while the new science of eugenics is emphasising the necessity of an education that leads to physical well-being. This diversity is bewildering, and a convincing and final statement of aims in education is impossible because our grip of the aims and purposes of life is not a very sure one; but progress is being made, for we are getting a clearer conception of values.

For Comenius the aim in education has no complexity. His gaze was fixed on the next world, the "ultimate end of man is eternal happiness with God," and by his own method of proof he shows that "we advance towards our ultimate end in proportion as we pursue learning, virtue, and piety in this world." The connection between these three elements is not very well brought out; but through the medium of Pansophia, "learning" was to mean a great deal more to the individual than the mere possession of information. Thus in Comenius there is little to be found that represents the germs of a modern theory of "aims," and we chiefly learn from him how deceptive is the false simplicity of phrases and of capital letters.²

III. Neither is the *Didactic* very illuminating when it deals with the material upon which education operates, the human child. Such conceptions and processes as imitation, character, attention, and memory are of course mentioned, and will be treated in the next section in connection with Comenius's contribution to method, but to demand even the germ of a modern treatment from one who wrote before the dawn of observational psychology would be to ask too much. The great contribution that

¹ For a luminous treatment of this topic, see Paul Natorp, *Philosophie und Pädagogik*, 1909, p. 121.

² For his mediate aim in encyclopædic knowledge and its connection with piety, see Part I. pp. 32-36.

modern psychology has made toward our knowledge of children has been the introduction of the genetic standpoint. It is now clearly recognised that childhood, adolescence, and youth must be clearly distinguished, that each stage presents its own problems, and that no *dictum* of education is equally applicable to all the stages. Different instincts, different capacities, different temptations display themselves at each stage, and therefore different methods have to be adopted and different aims have to be kept in view.

Comenius's general statements as to mind are too often dictated by a religious analogy. "Our faculties grow in such a manner that what goes before paves the way for what comes after" (ch. iii. 2). "Man is naturally capable of acquiring a knowledge of all things, for he is the image of God" (v. 4). "In addition to the desire for knowledge that is implanted in him, man is imbued not merely with a tolerance of, but an actual desire for toil" (v. 7). The only attempt at anything like a modern psychological analysis is in chap. xiii. 19, where he deals with character: "Some men are sharp, others dull; some soft and yielding, others hard and unbending; some eager after knowledge, others more anxious to acquire mechanical skill. From these three pairs of contradictory characters we get in all six distinct divisions"; which he then proceeds to discuss.

Here it is worth noting that he recognises the great difference that must always exist between one individual and another. He is by no means always up to this level, he tends to look on his subject-matter as uniform, and to believe that the generalisations of education are universal and apply to all individuals. "Hitherto," he says, "the method of instruction has been so uncertain that scarcely any one would dare to say, 'In so many years I will bring this youth to such and such a point; I will educate him in such a way'" (xvi. 4); and implies that his method will make this possible. He fails to realise that educational maxims hold good only of the group. If I divide a class into three groups, clever, medium, and stupid boys, I can with certainty make general statements about each of

these groups; but in each there may be one individual who runs contrary to the principle. Educational science deals with the group; the judgment of the teacher deals with the individual.

IV. On the side of method Comenius is greater than in any other aspect. It is here that his remarks are most suggestive and most often appear to anticipate modern views. The term "method" in its educational sense is so little understood and is used with such varying meanings that an explicit statement of what it should convey must precede our account of the contribution made to it by Comenius.

A considerable amount of confusion arises from the fact that the term has been employed to cover every statement or analysis that can in any way guide educational procedure, from the general analyses of mental processes whose influence on class-room method is remote though undoubtedly, to the particular device for teaching a particular element in a particular subject-matter which experience has shown to be suited to a boy of a certain kind. These elements to which the term "method" has been so prodigally applied may be arranged as follows in an order of decreasing generality:—

(1) Most general, and most remote from the procedure of the class-room, is the general description of mental process; the doctrine that we learn better through two senses than through one, the knowledge that the desire to move is a normal and healthy instinct in a boy of five, that the collecting instinct is universal, and grows and decays according to a fixed law, that habit, imitation, and imagination differ widely in their character according as we find them on the perceptual or on the conceptual level. It would be wholly incorrect to apply the term "method" to matters of this kind unless they are given with a certain normative implication, with the assumption that the practice of teaching ought in some way to conform to the nature of the mental process that they disclose; without this implication they are simply the psychology of the human mind and not in any sense normative.

(2) Next on the scale are statements of a traditional kind such as—

1. From the known to the unknown.
2. From the near to the far.
3. From the particular to the general.
4. From the concrete to the abstract.
5. From the part to the whole.

These are intended to be definite normative statements designed to guide the exposition of a subject-matter. A little analysis shows that they mean very little when interpreted in the concrete. All of them, and in particular the last three, are reversible. It is quite as often necessary to go from the abstract to the concrete, or from the whole to the part; in other words, a deductive or an analytical method is sometimes as necessary as an inductive or a synthetical method. When amplified and interpreted in this way, it is seen that these statements represent little more than an exposition of a number of modes of inducing mental processes from which a selection must be made to suit practical exigencies. The standpoint, however, is distinctly normative.

(3) Of a similar generality and needing interpretation by the teacher to suit his needs, but distinctly nearer to the actual problems of the class-room, is the choice offered between the three great methods of getting ideas into the minds of our pupils—demonstration, heuristic, and suggestion, or the blend of them needed for the treatment of a particular subject.¹

(4) Before we descend from the level of general statements to that of practical methods, we pass through a stage which forms a connecting link, the method developed, after Herbart, by Ziller, and intended to be a general formula or series of steps, conforming to the laws of mental process, and applicable to any subject-matter. These are the well-known stages Preparation, Presentation, Association, Generalisation, Application.

Lack of space prevents a discussion of this formula

¹ See the writer's *Suggestion in Education*, p. 125.

from the standpoint of Herbartian Psychology. As it stands it represents an inductive scheme prefaced by an introduction and followed by exercises; it apparently commits the teacher to reserve his associations for a particular stage in the development of his work, and it appears to leave out of sight the very large part that deduction must play in all reasoning and all exposition. If its terms are taken in their primitive sense, and if the scheme is taken as a universal formula, the teacher is confined to a method which by no means suits all kinds of work, and which by its false simplicity greatly obscures the actual difficulties of teaching. If the terms and their applications are so interpreted as to make them little more than a background of thought with reference to which the subject-matter of teaching may be arranged, we seem to have returned to the generality of stage (1). In this case the necessity for this particular scheme, which appears in a vicious manner to split up the continuous process of teaching into isolated lessons, is not very clear.

(5) Still approaching nearer to the definite work of the class-room, we find ourselves at a stage where lessons may be considered as falling under one of four or five types. Here we may conveniently contrast the type of lesson that gives knowledge with that which gives skill, the type which gives fresh knowledge with the type which deepens old knowledge, the type whose aim is solving of problems by the application of old knowledge, the type which has as its aim chiefly the exciting of curiosity, and so on.¹

At this stage also we may fitly consider certain elements in method that go far beyond the single lesson: such as the proper periods of the term for revision, the periods at which more independent work by the pupil is advisable, the arrangement of the incidence of these elements with reference to a coming examination, and similar matters.

(6) Finally, we reach special method in its most specialised form. We are no longer concerned with

¹ For an analysis of types of lessons of this kind see Welton, *Principles of Teaching*, p. 73 *sqq.*

method in general, with a formula for teaching all subjects, but with the particular modes of teaching a special form of subject-matter to a particular class of boy. We ask how a particular period of English History, say The Reformation, is to be presented to Upper Fourth Form boys who have already been taught some English history well, or have been taught badly, or not at all, as the case may be. Method of this kind can be properly treated only by those who have taught for many years and are familiar both with general methods of teaching and with the handling of the particular subject in the class-room.

We may now consider Comenius's contributions to method *seriatim* in the order of increasing particularity which has been adopted above.

(1) *The general description of mental process as a background.*—Here Comenius, owing to his absence of psychological analysis, gives a number of practical rules for form-management instead of the psychological background that we have considered. When, for instance, attention is in question, he has little to say about it. He (α) describes it in terms of analogy, “The mouth of a teacher is a spring from which streams of knowledge issue and flow over his pupils, and whenever they see this spring open they should place their attention like a cistern beneath it, and thus allow nothing that flows forth to escape” (ch. xix.); and again, “The light of the teaching art is attention” (ch. xx.). (β) He suggests practical devices (ch. xix.). The teacher who wishes to make his boys attend must (α) introduce an element of amusement, (β) of excitement, (γ) stand on a platform where he can be seen by all the boys, (δ) appeal to the senses, (ϵ) intersperse explanation with questions, (ζ) pass the question round to a number of boys without repeating it, (η) not only correct pupils but make clear the sources of error as well, (θ) allow individual boys to ask questions at the end of the lesson before the whole class. The whole is a curious mixture of unclassified advice.

(2) *The maxim stage.*—The pages of our author abound in maxims. Let us take the principles laid down in ch.

xvii. for Facility in Teaching and in Learning; they embody a number of what are now the traditional maxims of general method.

“The process of education will be easy :

- i. If it begin early before the mind is corrupted.
- ii. If the mind be duly prepared to receive it.
- iii. If it proceed from the general to the particular.
- iv. And from what is easy to what is more difficult.
- v. If the pupil be not overburdened by too many subjects.
- vi. And if progress be slow in every case.
- vii. If the intellect be forced to nothing to which its natural bent does not incline it, in accordance with its age and with the right method.
- viii. If everything be taught through the medium of the senses.
- ix. And if the use of everything be continually kept in view.
- x. If everything be taught according to one and the same method.”

Of these ii. is curiously like one of the Herbartian catch-words; but later on in the same chapter Comenius makes it clear that by “prepare,” he means not working in a system of apperceiving ideas, but kindling the desire to learn. It is, however, noticeable that elsewhere (ch. xii. 17) his language has a Herbartian sound, “Who, I ask, ever thinks it necessary that the teacher in the same way should make his pupils more anxious for information, capable of instruction and therefore ready for a many-sided education, before he begins to place knowledge before them?” iii. and iv. are old friends; the next five are characteristically Comenian, and the last seems to indicate a rigidity of method into which we must inquire later.

(3) *Demonstration, suggestion, heurism.*—How far is this triad represented in Comenius’s methods? Suggestion does not come within his purview, except in so far as it is the correlative of imitation, on which he lays stress. Heurism or a method of investigation one might expect

to find bulking big with a professed disciple of Bacon, but, in truth, Comenius, although on several occasions he seems to be leading up to it, never gets as far. He asks for what is sometimes called “Socratic questioning.”¹ “Pythagoras used to say that it was so natural for a man to be possessed of all knowledge that a boy of seven years old, if prudently questioned on all the problems of philosophy, ought to be able to give a correct answer to each interrogation” (ch. v. 5). Or again, he speaks of self-instruction in terms of praise. “The examples of those who are self-taught show us most plainly that man, under the guidance of nature, can penetrate to a knowledge of things” (ch. v. 8). Or again “The rational animal, man, shall be guided, not by the intellects of other men, but by his own; shall not merely read the opinions of others and grasp their meaning, but shall himself penetrate to the root of things” (ch. xii. 2). Or again, when he complains that “scarcely any one teaches physics by ocular demonstration and by experiment” (ch. xviii. 25). In all these passages he might be paving the way for an anticipation of Rousseau, but when he expounds his method it turns out to be demonstration and nothing more. With proper grading and suitable presentation to the senses, anything can be taught to anybody (ch. xii. 16). “All things must be taught in succession and not more than one thing at a time” (ch. xx. 21). Sequence, however, is but a preliminary to causal explanation. “Whatever is taught must be taught with reference to its nature and origin, that is to say, through its causes” (ch. xx. 18). Indeed, the Deity, whom Comenius conceives in the image of a schoolmaster, has organised the universe with the Comenian method in view. “All things have been harmoniously arranged by God in such a manner that the higher in the scale of existence can be represented by the lower, the absent by the present, and the invisible by the visible” (ch. xx. 11).

¹ This, it may be noted, is not the best or even an admissible form of questioning, if the questioning in the *Meno* be taken as the type.

(4) Does Comenius, like the neo-Herbartians, suggest any one method as a formula in accordance with which all subjects may be taught? He occasionally appears to do so. "All subjects and languages shall be taught by the same method" (ch. xix. 14); and in his desire to solve the great scholastic problem of the day, the supply of teachers, he lays down a rigid form of school-management and class-manipulation; but in detail he rises far above this level, and much of his work corresponds to our fifth stage.

(5) Certain definite types of instruction are distinguished. "There is only one natural method for all the sciences and only one for all the arts and languages. Any deviations that may be necessary are not important enough to constitute a fresh class" (ch. xix. 39). In other words, there are two types of lessons, those in which we explain—science; and those in which we teach how to produce something—art. Presumably language comes under both headings. The method of the sciences is given in ch. xx. and can be briefly epitomised. (a) Present to as many senses as possible; (b) use pictures and models if the real objects cannot be procured; (c) remember that the higher in the scale of existence can be represented by the lower; (d) learn through causes.

The Method of the Arts, given in ch. xxi., admits of a similar compression. (a) For artistic production three things are needed—a model, materials, and instruments. (b) Presentation on the part of the teacher and imitation and practice by the pupil are the stages of instruction. (c) Synthesis, *i.e.* original work, should be preferred to the analysis of the work of others.

(6) That Comenius's work on special method is confined to language need not surprise us, since it was still practically the only subject taught in schools, and his realism was largely of a verbal kind; boys had to learn about the universe through Latin. It is striking that his *dicta* that the mother-tongue and a modern language should come first, that then Latin should be begun, that one language should

be learned after and not at the same time as another, have recently been embodied almost word for word in the recommendations of the Classical Association, and that the parallel grammars which he demands came into existence some twenty years ago under the auspices of Prof. Sonnenschein.

It remains to mention two methods, to each of which Comenius devotes a chapter, the Method of Morals, and the Method of instilling Piety.

When he deals with the teaching of morality (ch. xx.) he adopts an Aristotelian position. Virtues are to be learned by continually doing what is right. Temperance is acquired by practising it, fortitude by subduing self. It is true that an opening is left for instruction. “Prudence must be acquired by receiving good instruction and by learning the real differences that exist between things and the relative values of these things”; but what would nowadays be called “direct moral teaching” in so far as this means talks about virtue, does not commend itself to Comenius. “No one,” he complains, “seeks to form the morals by working on the inward sources of action, but by purely external explanations and analysis of the virtues a superficial veneer of morality is given” (xviii. 25). No very explicit connection is brought out between morality and the system of ideas and habits given by class-instruction. A connection is certainly supplied in the doctrine of Pansophia, but in the body of the *Didactic*, Comenius, like J. H. Newman, separates a liberal education from moral training and places them in water-tight compartments. Similarly, he devotes a separate treatment to “the method of instilling piety.” The method is simple. It consists of “diligently impressing” the truths of religion on the young. This is one of the many educational methods that leaves out of sight the complexity of human nature. It neglects to take into account the tendency to react against teaching ; that proneness to contrariance which is so characteristic of the adolescent mind.

